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Issue 48 April 1995 £3.95

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AMIGA SHOPPER

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48 Inside issue

After a month in the job at the helm of Amiga Shopper, I feel like I'm getting to know you and what you want from your Amiga magazine...

We've had hundreds of Reader Survey's sent to the Amiga Shopper office in response to our request last issue – thanks to everyone who took the time to fill one out.

Most people were very enthusiastic about the new layout and design of the magazine and many of you welcomed the Coverdisks. Some people complained that there was far too much programming altogether in the issue – however, other people asked for more. What a fickle lot you are! You'll find that in this issue we still have our programming tutorials, but the general mix of features and reviews is much more varied. So there should be something for everyone.



You've given me plenty of ideas for features and other areas you want to see covered in the mag – all of your responses have been noted and will be taken seriously. And we'll bring you a full run-down of the Reader Survey results in the May issue.

One thing that was crystal clear from every survey I have read so far is that you are all passionate about, and dedicated to, your Amigas, so you will be pleased to hear that David Pleasance and his team are all confident that they will be producing and developing machines again very soon – see the news pages starting on page 12 for more information.

On Coverdisk 1 this issue we have HelmLite, a special version of the multimedia authoring package from Eagle Tree Software





and on ShopperChoice we have three extremely useful Public Domain programs, including the amazing ABase database. To find out how to use both of your disks, turn to page 6 for our Coverdisk instructions.

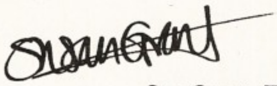
Also in this month's issue, Graeme visited 3D graphics rendering company Premier Vision (the team are pictured below left) and reports on what he found there. Richard Baguley (we can't seem to get rid of him!) and Clive Parker tests loads of modems in our Supertest (see picture above) and tells you which are the best of the bunch.

And we have an interview between our American correspondent, R Shamms Mortier, and Jeff White from Visual Inspirations, the company behind ProTextures (see page 48 for Graeme's review).

Along with our C, Assembler and Comms tutorials, Tim Tucker waxes lyrical about making music on the Amiga, starting on page 86 and Graeme begins his six-part Photogenics tutorial on page 76.

We have reviews of the Squirrel SCSI interface and we've decided to start a regular section (two pages this month) on the latest CD-ROMs available, turn to page 45 for this month's pick of the crop.

We've all enjoyed putting this issue of Amiga Shopper together and we hope that you will enjoy reading it! ■

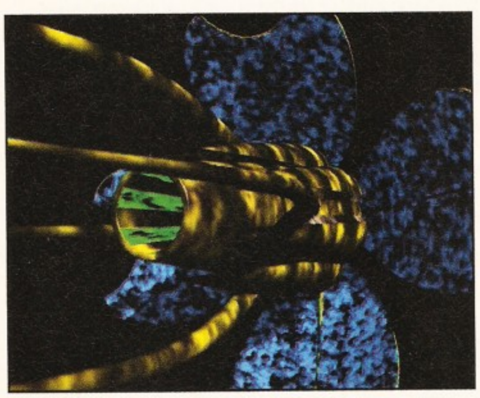


Sue Grant, Editor.

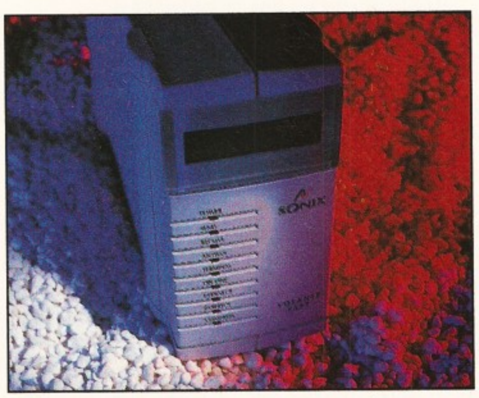
Turn the page for the contents of issue **48**

The **essential** magazine for Amiga enthusiasts

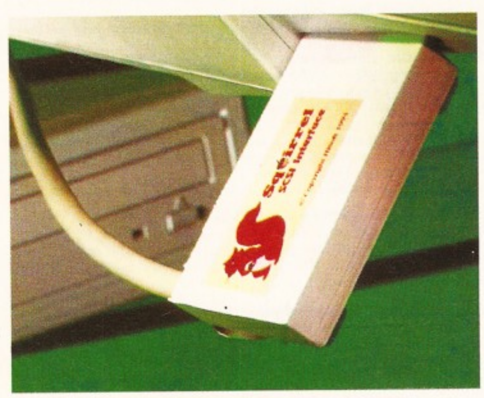
AMIGA SHOPPER



16 *A still from the Sonic Surfer's music video, created by Premier Vision.*



26 *We give you the low-down on the state-of-the-art modems.*

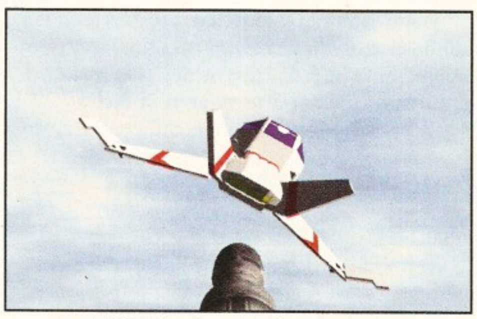


38 *This Squirrel SCSI2 interface could revolutionise your Amiga.*

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48 ***The alien-skin texture in the Pro Textures collection is particularly effective.***



49 ***PointAt is the targeting program in the Motion Master Volume II collection.***



53 ***Optonica's new file manager can display AGA and 24-bit images on your Amiga.***



Shopper**Disks** – turn to page 6



On Coverdisk 1 this month is the brilliant HelmLite, which is a true multimedia authoring system for your Amiga.

On ShopperChoice (Coverdisk 2) are some images from the key stages of this month's Photogenics tutorial, plus three handy Public Domain programs, namely: AmigaBase, VMM and XAnim.



Disk 1

This month, we've got a true multimedia authoring system on our Coverdisk 1 – HelmLite. ***John Parker*** *helps you make the most of it.*

Helm earned a whopping 91 per cent when reviewed by our Technical Writer, Graeme Sandiford, in issue 37 of Amiga Shopper (see page 106 for back issues if you missed this issue). HelmLite is a special version of Helm that enables you to create multimedia displays etc. with certain restrictions.

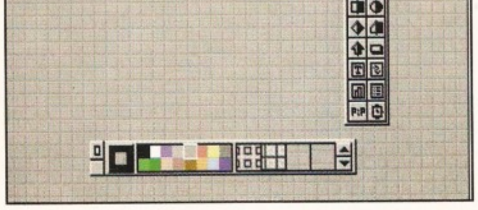
Unpacking HelmLite

Place your Amiga Shopper Coverdisk in DF0 and double-click on the disk's icon. When the disk window opens, you will notice that there is an installer program for hard drives and one for floppy disks. Everything is automatic – just choose the appropriate option for your system and follow the on-screen instructions.

If you decide to install to hard drive, a drawer called "Helm" will be created on the drive of your choice, so there's no need to use the Installer's "create new drawer" feature. Those of you who use floppy-based systems will need two disks to which HelmLite can be unpacked. These will be formatted during the installation process, so make sure that they don't contain any data you want to keep!

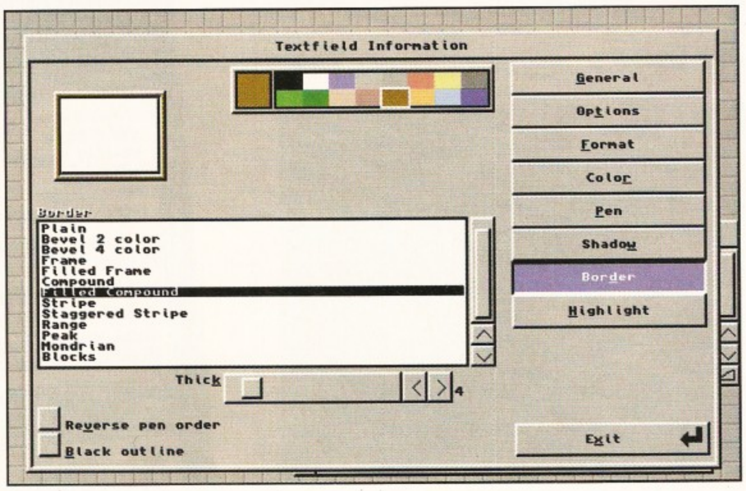
To run the program, hard drive users should open the Helm drawer and double-click on the Helm program icon. Floppy users will have a program disk and a disk containing example books, but the program disk will not autoboot.

To use HelmLite, simply boot with your normal Workbench disk, replace it with the HelmLite disk and go on from there.



From tiny acorns... We begin with a simple background and use the palette requester's patterns to make it a bit more interesting.

Creating objects with borders is never guesswork when there's a handy preview on display above the main list window.



Limitations on HelmLite

Unlike some demonstration versions of other packages, HelmLite saves your work to disk, which means you don't have to start from scratch every time you load the program. The main limitations are that you can only produce books of up to 20 pages each and that the printing option has been de-activated.

The CD^{32} extensions found in the full Helm package have also been removed, so if you want to create multimedia applications for use on the Amiga's console sister, you'll have to take advantage of our upgrade offer on page 72.

Other than these restrictions, the full power of the program is available to you, so there's nothing to stop you creating a complete book with user buttons, hypertext and your own images and sound samples!

A tour of the program

Helm is a page-based application which enables the user to quickly set up multimedia "books", information systems and a wide range of other applications. When the program is run, it automatically loads the bookshelf application, which is a front-end, generated by Helm, offering access to the examples distributed with your copy of HelmLite.

Clicking on any of the buttons on this screen loads and runs the appropriate book and, as the examples have been created to show off the program's diversity, it's a good idea to run through them all and have a good old clicking session.

Helm-features themselves are accessed via standard drop-down menus and the AmigaGuide help feature, which was installed to the same disk or drawer as your Helm program, contains full details on what they do.

Creating a HelmLite application

To keep things within the available space on these pages, we'll create a simple information system based on a number of pages which can be accessed from a list held on an index page. You could store anything you like in such a book, but we'll start with that old favourite – video cassettes.

Starting on the default bookshelf screen, choose New from the Book menu, use the file requester to find a place on disk for your book to be saved and give it a name – when Helm asks you if you'd like to copy the current form to the new book, click on the No button. This ensures that we start with a clean slate.

You should now be looking at a blank screen, so use the right mouse button to reassure yourself that the menus are still there. This would be the best time to set up the best display mode for your book, so go to the Author menu, choose the Display sub-item and find a screen mode that suits you. It's best not to go below normal 640 by 256

hi-res, but you can choose lo-res if you wish.

Now, let's get some tools on screen, so we can start creating. Choose the palette and draw tools options from the Tools menu and you'll see two floating toolboxes appear on screen. We'll use the filled rectangle tool to draw a background, but a plain colour would be dull, so use the up/down gadgets on the palette requester to find a pattern you like and draw a filled rectangle the entire size of the screen.

Look at the two arrow buttons at the top of the selection of tools. The one on the right is the editing arrow and when this option is selected you'll be in edit mode. To test a page at any time, you would click on the left-hand arrow to go into test mode, but don't bother with that until we've added a bit more detail.

To add the index to our index page, click on the textfield gadget (a box with a 'T' in it), then draw a box which covers roughly the left-hand side of the page. When this appears, it will have the same pattern as the backdrop, so double-click on the textfield to bring up its information screen.

Using this screen, we can click on any of the buttons down the right-hand side to edit the textfield's properties. Click on Options first, then look at the list of attributes on the left. You'll see one for line selection and one for up and down buttons, which you should click to toggle on (a check mark appears beside them). These options make it possible later to click on a line of text within the textfield and have each line do something different and the other will place scrolling up/down buttons at the bottom of the box.

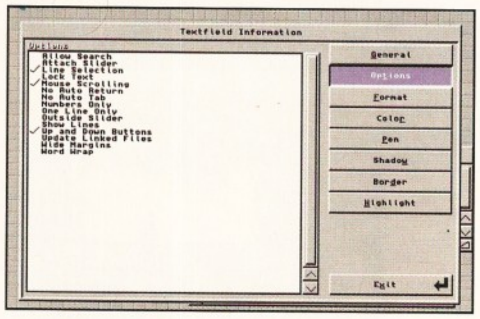
Now, click on the colour button to the right and choose a suitable colour from the palette requester which appears to the left. White would be best, as this colour will be used for the text background. Now click on the Pen button and choose a colour for the text itself.

You should also click on the Show Name button and the Caption button, which places the name of our textfield above it on screen. There are a number of options for placement of the name below these buttons, so choose one, then click on the Font button and select a suitable font from your Fonts disk or hard drive. Now, click on the General button to the right and type the words INDEX OF MOVIES into the name field at the top of the screen.

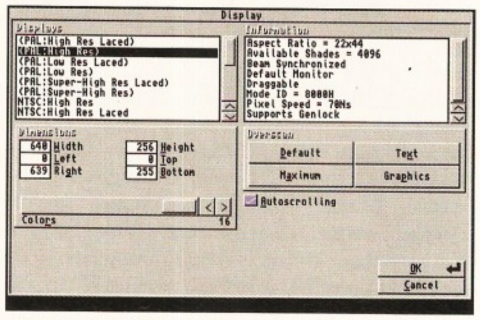
Finally, we'll add a border to the textfield, so click on the Border button which brings up a long list of the various border options. Before choosing a border style, use the slider below the list to make the border at least a few pixels thick so we can see the effects of our choice on the preview box above the list.

The toggle button for reversing pen order can be used to experiment with effects which give the border an embossed inward or outward appearance and clicking in the colour palette at the top of this screen will choose a colour. My own preference is for a brown border, four pixels thick, with the filled compound style. This results in a wooden frame effect.

Next, click on Exit and you should see your index textfield sitting ready for you to enter a list of movies. Click on the test arrow, then in the textfield and you'll notice that a cursor



Options for line selection and up/down buttons will give us our basic list textfield.



Change the display to any resolution which suits you using the Author... Page menu item.

appears. Now, type the names of a few movies, hitting Return after each one so that they're all on their own line. If you find that there's not enough room to fit a whole title on one line, go back into edit mode by clicking the edit arrow and drag out the size of your textfield.

Once you've typed a few movie titles, go back to edit mode and double-click on the textfield to bring up its options screen again. Click on the Options button to the right and check out the options list on the left. You will see a line which says "lock text" – click on it to toggle it on. This ensures that the next time you go into test mode and click on a line in the textfield, Helm will try to carry out an action, rather than invite you to input more text.

Now we're ready to create the pages which will contain information on our movies. Access the Go menu and choose the New Page option, which gives us a blank screen again. We could go back to the index page and copy it, then paste this into the new page, but it's nice to have different looking pages for the movies.

Right, now choose a background colour, or pattern, for this page and draw a filled rectangle to fill the whole screen as before. Notice that once the rectangle is drawn we can change its fill colour or pattern by just clicking in the palette requester, so it takes no time at all to experiment with a different look.

Now would be a good time to double-click on our background, choose General options and toggle the "cannot move" option on. This makes it impossible to accidentally move the background around and, for good measure, you can toggle "cannot delete" on for extra safety.

We'll need a box with the movie title, textfields for director, year, certificate, rating and running length and a textfield with notes on the film itself. These are easily created and you needn't do them one at a time.

Just choose a colour for the background on the new box, then use the solid rectangle tool to create a box which is long enough for the information you'll store in it, bearing in mind the font and font size you're going to want to use. Now double-click on the box, wait until its information screen appears, then click on the Pen button.

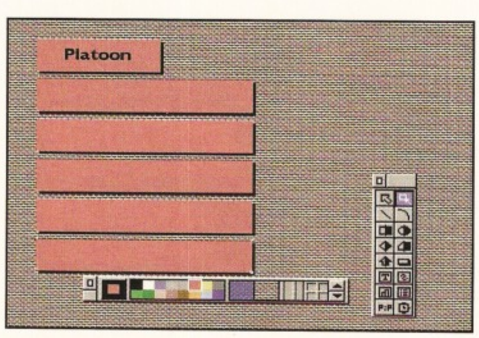
Choose a pen colour and Show Name as before, but leave Caption alone, then click on the middle position on the Location gadget below this to force the title into the centre of the box. Choose a font using the font button and decide whether you'd like text styles such as underline or bold. Now click on General and type the name of your first movie into the name field at the top of the screen.

Finally, click on the Shadow button, select the Solid option and experiment with colour and depth of shadow using the palette requester and the size gadget respectively. Now click on Exit and your title box should be on screen in all its glory. You can move it to wherever you like by just clicking on the box and dragging with the left mouse button.

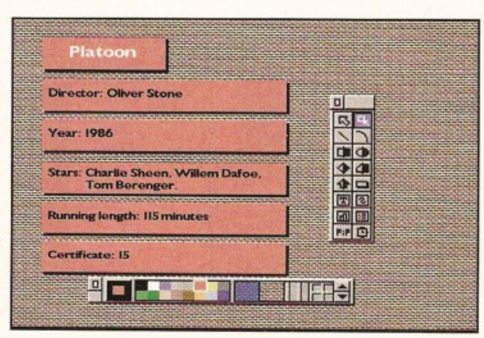
Now for the other boxes. Click on the filled rectangle gadget and drag out another box, this time leaving enough room for an identifier such as "Length", or "Director" with a fair amount of space to the right where we'll add a text field. Give the new box the same colour and shadowing as the title box and use the Grid option from the Edit menu to align the two boxes. With snap-to-grid turned on you'll find it a lot easier to line up things up.

Don't bother giving the box a name for now, just click on it once and choose the Duplicate option from the Object menu. Set the sliders there for five rows, one column and row spacing of one unit, then click on OK. Hey presto, four more boxes.

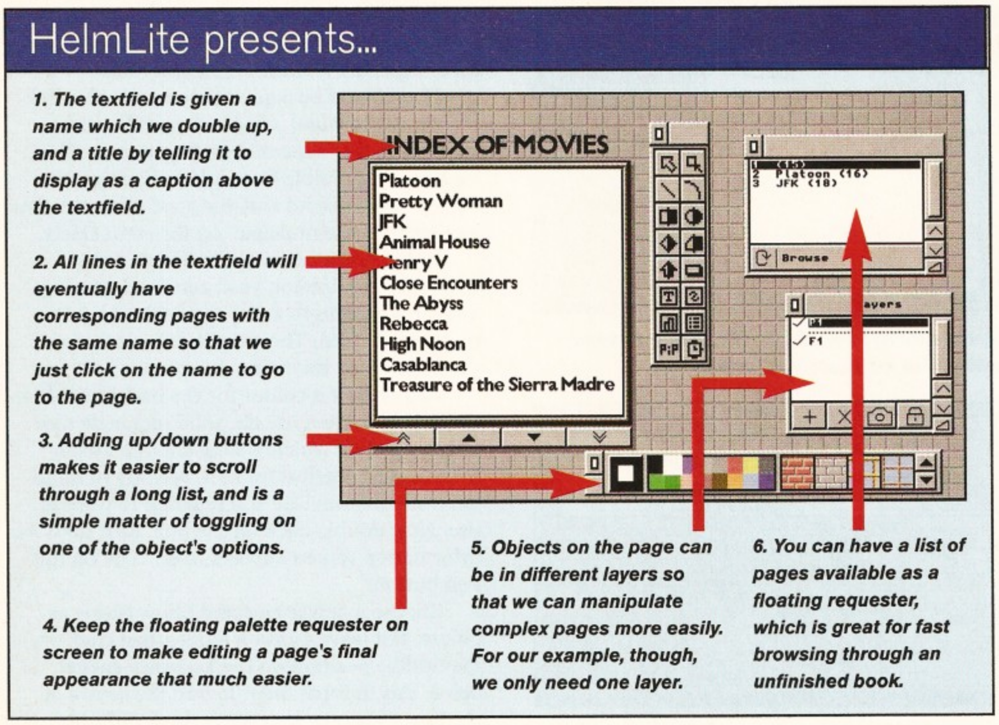
Now we need textfields over the boxes so that we can enter the information. Use the



Our first movie page is easier to create when the duplicate feature can make so many boxes at once.



We've added textfields to the boxes, but kept them transparent so that they don't show over the top.



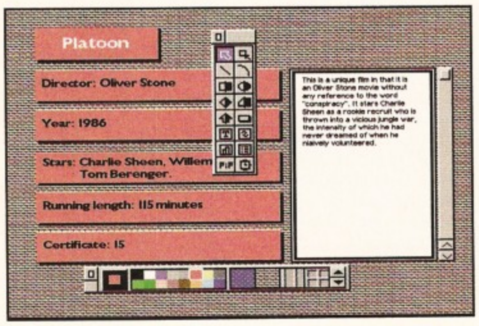
textfield gadget to drag out a field which is entirely within the first box and set its options so that its colour is transparent, but this time when you choose a font for the text within the field, choose it from the Format options, as Pen options set only the font for the textfield's name which we won't be bothering with. Still on the Format options, choose left alignment and hit Exit when all choices have been made.

Now click on the test arrow, then on the text field and type "Director:" to see how things look. You might want to use the Grid option again and change the size of the grid to four or five to make aligning the text in the centre of its background a bit more precise.

Once satisfied, use the duplicate option again to create four extra copies of the textfield and go into test mode to enter the other information such as running length and certificate. When you've finished doing this, the page will look a lot busier than before. All we need now is a textfield for the review.

This should be a box on the right-hand side of the screen using a smaller font than the main info boxes and as the review might be quite long, we'll bung a scroll bar on it. To begin, go back to the good old textfield gadget and drag out a new box about the same size as the index box on our first page.

Now double-click on the new textfield and



With the scrolling textfield for our review text added, the page is almost complete.

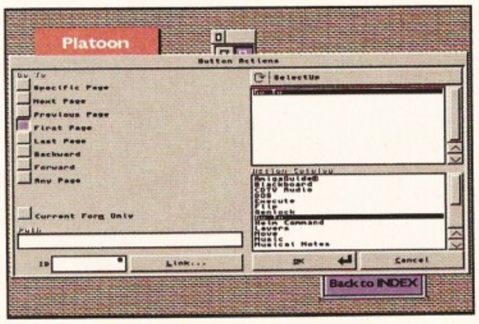
set up your paper, font and border options in the same way we've been doing all along. This textfield will be a little different, however and will require a couple of extra options.

Go to the Options screen for this box and toggle on attach slider, word wrap, wide margins and outside slider. These will ensure that the text is not cramped up against the side of the box, that it will wrap around as you type in your review and that when the review is too long to fit in the box, you can use the slider to move up and down through the text.

If you now enter test mode again, you can type in the full review, then go back to edit mode and select "lock text". As far as the information is concerned, the page is complete, but one thing is still missing – a method for getting back to the index page.

To set this up, simply select the button gadget, which is fourth from the bottom on the right-hand column of tool gadgets and bung a button in below the review textfield. Set this up by double clicking on it and bringing up its information screen. Tell it to contain its own name – we can call it "Back to INDEX" – and choose a font, colour and border style again.

Now click Exit to get rid of the button's information screen, click once on the button to select it, then choose Actions from the Object menu. This will bring up a list of the actions



Finally, add the Back to INDEX button and use the Actions menu item to give it a page-hopping function.

your button can perform, all of which are listed in the Action Catalog window in the bottom right-hand corner.

Use the scroll bar to the right until "Go To" is visible, then click on this action and drag it into the blank window in the top right. A number of buttons will appear on the extreme left, including one which simply states "First Page". Toggle this one on, then click on OK.

Before we leave this page, we have to give it a name, so choose Page from the Author menu and type the name of the page into the field at the top of the screen. Make sure you make the name exactly the same as it was in the original index list, so type the title of your movie (in my example, this is "Platoon") and hit the OK button.

To test the Back to Index button, go into test mode, click on it and you should be returned to the index screen we started with. Now to set up the list so that when we click on the name of a movie, Helm knows that it should go to the page with that movie's name.

This is achieved using a simple script. Helm's built in scripting language is very powerful, but we'll be using a simple command which fetches the line of text you click on and tries to find a page whose name matches the text. Now you know why we called the information page by the same name as the movie!

Click once on the index object to select it, then choose the Script option from the Objects menu. This will open an editing screen with three lines of text already in place. The first simply tells Helm that it should carry out the script when the user clicks on the index and lets go of the mouse button and the other two set the beginning and end of the script.

Place your cursor between the begin and end lines (on a line of its own) and type:

```
go to page (line clickedline of me)
```

This command does the job of passing on the title of your movie and going to the correct page. Everything has now been set up for navigation, so you should be able to enter test mode, click on the name of your movie, then click on Back to Index to return to where you started.

Building a complete book of movie reviews should now be a simple matter of copying the one movie page we've completed and copying it to as many new pages as you require. Just use the Copy Page option from the Edit menu, use New Page on the Go menu, then select Paste from the Edit menu and change the details in the boxes for the new movie entry.

Once you've done that, use the Author...Page option to change the name of the new page to reflect its index entry and you can quickly build the book up to the 20 page limit set by HelmLite.

That's all we have room for in this introductory tutorial, but if you think that Helm's superb multimedia capabilities are something you'll want to use more, you can always take advantage of our not-to-be-missed upgrade offer for the complete Helm package with manual and unrestricted program. See page 72 for how to order your copy.

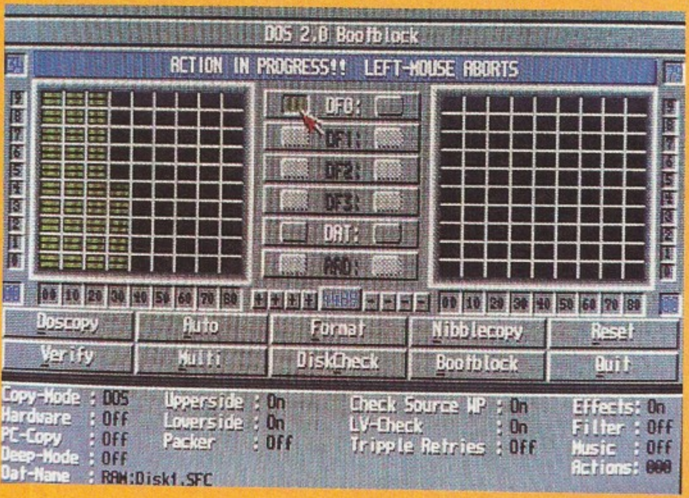
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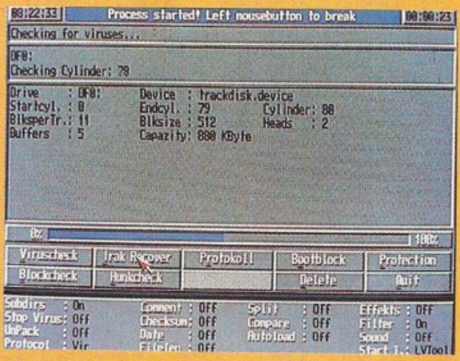
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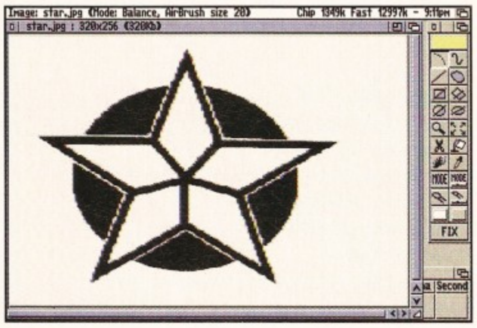
Directions:- From M62 junction 17, head towards Bury. We are 25 yards on the right (opposite the 'Masons' pub) after the third set of traffic lights.

siren



Disk 2

There is simply oodles and oodles of good stuff on this month's Coverdisks. There are files to go along with our new Photogenics tutorial, a virtual memory system and a frighteningly powerful database.

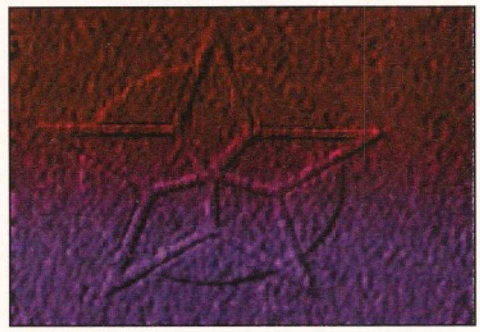


Before and...

Tutorial files

This month on the tutorial front, we've got some bad news, but we've also got some good news. First, the bad news – due to circumstances beyond our control, we have not got the listings text files that normally accompany our C and Assembler tutorials.

The good news is that we have included some of the images from the key stages of this month's brand-spanking new Photogenics tutorial. They have been saved as JPEGs and are 320x256 pixels, so that *almost* everyone should have enough memory to load them in.



...after (the new Photogenics tutorial, that is).



XAnim is a powerful animation displayer.

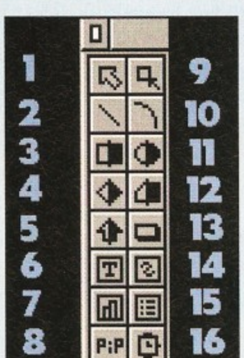
XAnim

WB2+ and 020 processor (AGA graphics recommended).

This is one for all you Netters out there. If you regularly travel the Internet, then you'll probably have come across several files that have originated on the UNIX and PC platforms. They could be anything from a hypertext file, to pictures, or animations. XAnim will display an amazing variety of animation formats, including DL, FLI, AVI and Quicktime.

However, one or two formats have been disabled in this version. To use this program fully, you'll need Terje Pedersen's libX11 and an as fast as possible processor. This is really a power-user's tool – if you need this program, you should have the necessary files and a fast machine. If you have a machine capable of playing back these kind of files, available on the Internet, then you'll be pleased with the results.

HelmLite – what's what



1. Test mode.
Turns off the Object and Image menus, activates the Text menu, and makes it possible to test how buttons and other objects work.
2. Draw line.
Holding down right mouse button brings up selection of line drawing styles.
3. Filled rectangle.
Holding down right mouse button brings up choice of rectangular or square drawing modes.
4. Draw polygon.
Click on this with right mouse button to select regular polygons, stars, or rays.
5. Draw arrows.
Click with right mouse button to edit the shape of arrows drawn.
6. Create textfield.
Click with right mouse button to select new text, imported text, or hypertext link.
7. Create graph.
Hold down right mouse button to choose between the five types of graph.
8. Create Pipfield.
9. Edit mode.
Click and hold right mouse button to switch between edit and repeat mode.
10. Create arc.
11. Create filled circle.
Click and hold with right mouse button to choose between circle and elipse mode.
12. Draw polygon.
13. Create button.
14. Create image field.
Click and hold with right mouse button to swap between new image, hypertext link, or exported image.
15. Create selector.
Use this tool to create radio buttons, multiple choice gadgets, check boxes, etc.
16. Create timer object.

Dodgy disk?

If your disk absolutely refuses to work and you are certain it is faulty, please return it, along with an SAE, to:

Amiga Shopper Coverdisk (insert the name of the disk), Discopy Labs Ltd., PO Box 21, Daventry, NN11 5BU.

DICE 3.0

Last month we had DICE 3.0 on our Coverdisk and within the instructions we mentioned an E-mail address for an automatic E-mail mailing list. The E-mail address was emailurl@flevel.demon.co.uk. We also asked you to include some lines in the body of the message with the address which was incorrectly printed.

We also did not mention the fact that Visual Make is included on the Coverdisk in order to reduce the need for CLI commands and to aid beginners.

And on pages 8 and 9 the printf commands are missing ") which generates the following error: Error 18: unterminated double quoted string.

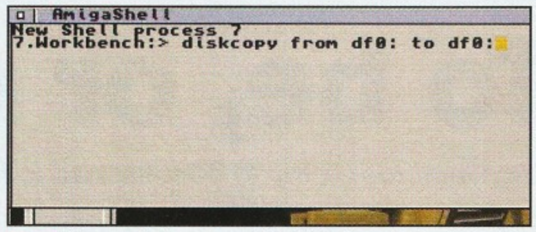
The correct message to include is: `subscribe dice my_user_name@my.email_address end`

Back up that disk

Before using either of this month's Coverdisks, please be sure to back them up – just in case. Simply follow the easy instructions below if you are not sure how to do this.



1 ***Boot up from your Workbench disk or partition, double-click on your Shell icon – to be found in your system drawer.***

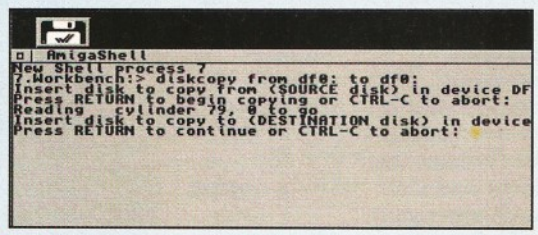


2 ***If you only have one disk drive, type in the following line and then press return.***

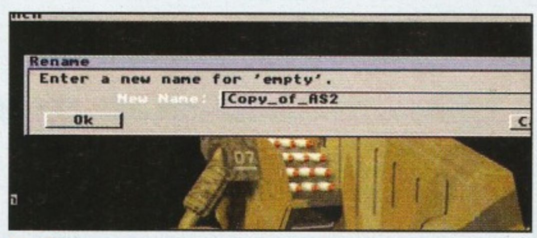
`Diskcopy from DF0: to DF0:`

If you have two drives, place the Coverdisk in DF0: and a blank in DF1:, then type in the next line instead.

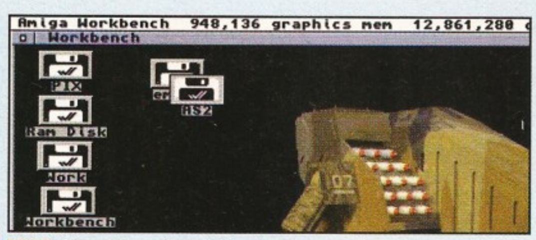
`Diskcopy from DF0: to DF1:`



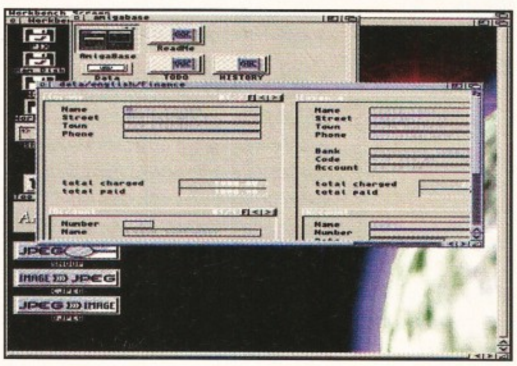
3 ***Follow the on-screen prompts and remember that the Coverdisk is the source disk and the blank is the destination.***



4 ***If you used the two-drive method, remember to rename the copy by clicking on its icon and pressing right-Amiga <r>.***



5 ***If you have two drives, you can also copy the disk from Workbench by dragging the Coverdisk icon over the destination disk's one.***



Impress your friends with your new-found powers of organisation – get AmigaBase which is yours for free on this month's Coverdisk.

AmigaBase

Wb2+ required

First off, let me make an apology. There has been an error in the saving of this program's archive, which has resulted in the installation script not working correctly. The main culprit is the gadget.library which has been inadvertently left out of this archive.

This library is needed by the program, but, as it is a very common library, you'll probably have it already. Just in case you don't, we'll be supplying it on next month's Coverdisk. What this means, is that you'll have to install the program manually.

The first step is to double-click on the Extract_ABase icon. As usual, this will unarchive the file to your RAM disk. The next step is to double-click on your RAM disk icon, select the AmigaBase folder you'll find in the window and then drag it to your destination directory. Next, we need to assign the AmigaBase directory, open a new Shell window, by double-clicking on your Shell icon. Type "Assign AmigaBase: " followed by the directory path that you copied the folder to – be sure to include a space after the colon.

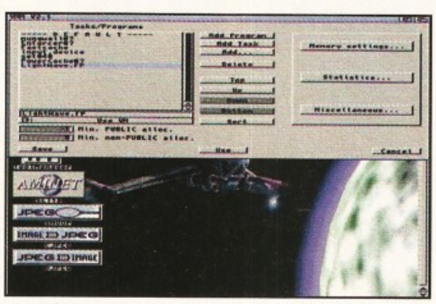
You can now run the program. To save you typing that line every time you want to use the program, insert it into your user-startup sequence. If you intend to use the program from floppy, then format a disk and call it AmigaBase and copy the files inside the AmigaBase directory to it.

VMM

Wb2+ and 030 processor with MMU

I've had a lot of reader queries about one of my favourite utilities, VMM. So, I put the latest version of VMM on this month's disk. For those of you who don't know, VMM is a virtual memory manager. It provides you with more memory by using your hard disk space.

What's this... more memory for free? Well, not quite, although there is no need to fork out as much dosh as you would for more silicon-based memory – you pay in terms of speed. However, VMM is one of the fastest virtual memory managers that I have come across. It's one of the most reliable too – as reliable as any virtual system can be. To speed things up, you can dedicate a hard drive partition to act as memory, or even create a pseudo partition.



VMM gives you more memory for free.

News

In Amiga Shopper's news pages this month: all the latest on Commodore; your chance to win a Ramiga Z5 in our super competition; LightWave seminars; a new CD-ROM collection and MEMS '95.

To be, or not to be?

Sue Grant took a trip to Maidenhead to find out whether there has been any progress in the sale of Commodore...

I recently visited David Pleasance in the Commodore office at Maidenhead. Though there wasn't a great deal of activity apparent in the research and development unit, Mr Pleasance and his staff were very busy preparing for the day that the management buy-out is successful. They are ready to leap straight into action and get the Amigas sitting in the warehouses back into the shops and start manufacturing machines again.



Unfortunately, at the time of going to press the only news is that an agreement is about to be signed between the management buy-out team and the liquidators. This is a document confirming how much money the MBO team has offered for the company, and what exactly they will be getting for their money. After this document is signed, there is still a period during which the liquidators will accept any higher bids, but Mr Pleasance was certain that there were "no other players in town" and there was "no reason on earth why it [the MBO] should not go ahead".

David Pleasance has set up an information hotline number ☎ 01628 779655, which you can call to receive recorded updates on the Commodore and management buy-out situation. You can also contact the Amiga Format Commodore news page on Futurenet, at:

http//www.futurenet.co.uk/amigaformat/commodore.html

Titbits

New from Silica

Silica have released the Amitek Loader 500, which is a high quality internal replacement floppy disk drive for the A500 and A500+.

This 3.5-inch drive gives a 1Mb unformatted capacity and comes with mounting pillars and a special unit eject button. The Amitek Loader costs £39.

Also from Silica is the Amitek Mamba – an external modulator which can be used with any Amiga. The Mamba costs £34 and comes with an extended two year warranty.

For more information about both the Amitek Loader and the Amitek Mamba call ☎ 0181 309 1111.

Lots of labels

Add style to your mailshots with Avery's new range of InkJet labels. The labels are designed for colour InkJet printers and will not feather ink, so you'll get top-quality definition for your copy.

These labels are available in several different sizes and come in packs of 25 sheets – each pack costs £19.95.

If you want to try out Avery's range of labels to help you decide which are the most suitable for you, they have released two new sample packs. You can get hold of a pack for either InkJet or Laser printers.

To get free advice on labelling and further information, call Avery Dennison Consumer Centre on ☎ 0800 80 50 20.

Sounds fantastic

Logic 3 have produced the Screenbeat Pro 5 speaker system. The speakers feature, amongst other things, 50-Watt peak power, volume and tone controls and an earphone jack.

The speakers cost £39.99 and you are able to find them in most good computer stores.

Price reduction

Alternative Image's titling system, Scroller 2, has been seriously reduced in price to £30.

The previous RRP was £80, so this is a rather hefty reduction. Contact Alternative Image on ☎ 0116 244 0041 for further information.

More from Fred

Texture Gallery is a new two CD-ROM set from Fred Fish and Amiga Library Services.

The CD-ROM set has loads of 24-bit textures in lots of different file formats. These textures can be used with LightWave 3D. Texture Gallery will cost approximately £30 ($44.95).

Also from Fred Fish and the Amiga Library Services comes LIGHT-ROM 2, which contains over 3,500 objects for use with LightWave. LIGHT-ROM 2 will cost around £28 ($39.95).

Amiga Library Services are based in the US and can be contacted on ☎ 0101 602-491-0048

Complete Amiga C book

There was a certain amount of confusion caused by two mentions of the Complete Amiga C book in Amiga Shopper's March issue.

On page 86 we boldly state that the book is still available and to call a hotline number for a copy, but then, on page 118, we tell you that the book is out of print.

Sadly, the latter is the case.

Total confusion

TOTAL Computing of Poole in Dorset would like us to say that they have no connection whatsoever with Total Computer Supplies in Hemel Hempstead.

TOTAL Computing specialise in all aspects of PC and Amiga and can be contacted on ☎ 01202 717001.

Warning

It is advisable to only order goods from advertisers in current issues of Amiga Shopper and be suspicious if the advertiser does not accept credit cards.

Hobbyte Computers have now ceased trading and another company have taken over their premises. They are called Computer Express Services and are *not* Hobbyte.

We have had a few complaints and would suggest note is taken of this warning.

New software club

A new software club called Inspira has been launched. Members receive a newsletter and discounts on PD and commercial software.

To join, send a cheque or postal order for £10 to Mr D Cowell, Inspira software club, 45 SandyHill Road, Woolwich, London SE18 7BQ.

Get in print with Canon

The BJ-200ex InkJet printer is the successor to the BJ-200 and Canon reckon it to be an ideal printer for both the home-user and the office-user who requires a personal printer. The BJ-200ex is a high-quality mono printer and it costs around £259. For information, call ☎ 0181 733 3173.

Canon have also released a high-capacity ink cartridge for the BJC-600 printer and glossy paper for the BJC-400 and BJC-600. For more information and prices, contact Canon on ☎ 0181 563 2222.



The new BJ-200ex InkJet printer from Canon.

LightWave seminars

If you want to find out more about LightWave, then why not attend one of Premier Vision's LightWave 3D seminars? Whether you are a complete beginner, or something of an expert, Premier has aimed the seminars at all levels of experience.

The LightWave Basics seminar costs £49 (plus VAT) per session, Advanced Techniques And Effects costs £99 (plus VAT) per session and The Latest from Lee Stranahan costs £199 (plus VAT) per session. All of these seminars start around mid-April and will continue for a couple of months. The Lee Stranahan seminars take place on 24th-28th April, but phone Premier to confirm details.

For details on how to book, contact Premier Vision on ☎ 0171 721 7050, or fax 0171 721 7049.

The whole AmiNet

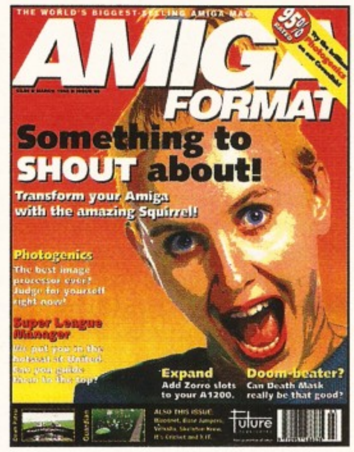
A brand new AmiNet CD-ROM collection has just been released from Germany. Unlike previous AmiNet CD-ROMs, which have only contained a fraction of the AmiNet because of it's huge size, AmiNet Set I actually contains the complete AmiNet. It's available from PD Soft for £32.95.

The AmiNet is the section of the Internet that is dedicated to software. This collection is a four-disc pack that has all of the AmiNet's file as of January 95. It's like a snapshot of the site on disc. It contains text files, programs, 3D objects, demos, music modules, samples and lots more.

The collection also comes with a search facility, which can be used to search the ReadMe files that accompany the programs and files. It also comes with a picture displayer that displays thumbnail images. To get hold of this collection, call PD Soft on ☎ 01702 466933.



Meet our sisters



Hello Amiga Shoppers. By the time you read this we may have found out whether the Commodore UK management buy-out team have been successful in their bid to take over the old Commodore. We've been following developments closely and we'll be bringing you the full story in AF70 (on sale Thursday, March 16). If you value your Amiga, you can't afford to miss it.

Our AF70 creative Coverdisk really is something very special – an exclusive version of the excellent Wordworth word processor. And there's also a word processing feature to help you get the most out of this brilliant Coverdisk.

Plus there's the games Coverdisk, reviews of modems, genlocks, a video digitiser, Comms, PD, Workbench letters and so much more. Don't miss it. Well, you can if you like, but I won't be your friend any more.

Nick Veitch, Editor.



The front of the March issue of Amiga Power depicts the legendary World War 1 flying ace, the Red Baron, quite literally "comin' at ya" (as we believe young people today would say).

Our monocled chum is one of the stars of Empire's fantastic new flight sim Dawn Patrol, which is reviewed inside. There are two Coverdisks containing four – again, quite literally – exemplary demos, including one of Guardian (the Game of Champions). And there are loads of other features, reviews and things. AP47 – it's good!

Jonathan Davies, Editor.

Are we really in the computer age?

Gallup have carried out a survey for a recently-published Key Note report, entitled UK Computer Market .

Apparently, 1,000 people took part in the survey and the results appear to indicate that the paperless office is still a concept of our dreams – only 18 per cent of people admitted to being competent with computers and 37 per cent hardly ever came near a computer!

Only 6 per cent of people questioned use E-mail and only 6 per cent were at all interested in doing their shopping by computer.

Copies of the UK Computer Market report can be obtained from Key Note on ☎ 0181 783 0755.

Future Music Show

The MIDI, Electronic Music and Recording Show (MEMS '95) is taking place at London's Olympia from 21st to 23rd April 1995. The show is hosted by Amiga Shopper's sister magazine, Future Music.

If you enjoy making music with your Amiga, then this show is unmissable. It will feature over 60 exhibitors and will also have free seminars running throughout the three days of the show.

If you book in advance, you can save yourself some dosh. Group bookings of 10 or more pay £4.50 per ticket, advance tickets cost £5 each and tickets bought on the door cost £8 each. To order your MEMS tickets, call the hotline on ☎ 01369 707 888.

MEMS '95

HiQ announces the PowerStation

The PowerStation from HiQ is aimed at the A600 and A1200 machines and is based around a converted multimedia case. It features a 200 Watt power supply, up to five drive bays with cable supplied, a monitor stand and cable tidy, a high speed SCSI interface and a dual-speed CD-ROM.

The PowerStation comes in three versions: a multimedia system; a slim line unit without speakers; and a mini tower.

The PowerStation costs £299.95 (plus VAT and P&P) and for more information, contact HiQ Ltd on ☎ 0181 909 2092.



HiQ's PowerStation.

Win a Ramiga Z5!

Compo



Yes, you could win yourself a Ramiga Z5, plus power supply and keyboard (or a cash refund if you have already bought yourself a Z5). The Z5 adds five Zorro II slots to your A1200 (see our feature on page 20 of AS47 for more information).

All you have to do is answer the three questions below and send the answer on a postcard (or on the back of a sealed envelope) to:

Z5 Competition, Amiga Shopper, Future Publishing, 30 Monmouth Street, Bath BA1 2BW. Closing date is Tuesday, 4th April 1995.

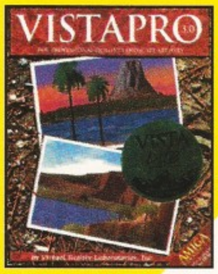
The questions

1. How many Zorro II slots does the Z5 add to your A1200?
2. What is the price of the Ramiga Z5?
3. Who wrote the feature on the Ramiga Z5 in Amiga Shopper issue 47?

The rules

1. All entries must be received by Tuesday, 4th April 1995
2. The editor's decision is final.
3. Employees of Future Publishing Ltd and Ramiga International aren't allowed to enter this competition.

Emerald Creative Technology



Create stunning landscapes and flythroughs with Vista Pro, Makepath & Terraform,and explore the night sky with Distant Suns. £59.95+£4.00p&p

All Prices Include VAT

New version of the incredible 3D package from Impulse. Bones feature, new textures and more. Order with the Essence & Forge pack for an even better deal ! £99.95+£4.00p&p



Amiga-PC Utilities

PC Task 3 NEW £59.95
EMULATE A 286 PC, RUN WINDOWS 3.1 IN SVGA SCREEN MODES, WOLFTENSTEIN 3D ETC
PC Task v2-3 upgrade £34.95

Books

Secrets of Frontier Elite £8.95
A1200 Insider Guide £12.95
A1200 Next Steps £12.95
Amiga Disks & Drives £12.95
Assembler Guide £13.95
Imagine Hints & Tips £7.95
Workbench A-Z £13.95
Mastering Amiga Amos £17.95
Mastering Amiga Arexx £17.95
Mastering Amiga Beginners £17.95
Mastering Amiga Printers £17.95
Mastering Amiga Dos 3.0 Reference £19.95
Mastering Amiga Dos 3.0 Tutorial £19.95
Mastering Amiga Dos Vol1 .... £19.95
Mastering Amiga Dos Vol2 .... £17.95
Mastering Amiga Scripts NEW £19.95
Amiga Beginner's Pack £36.95
INCLUDES A1200 INSIDER GUIDE, A1200 NEXT STEPS, AMIGA INSIDER VIDEO + 4 DISKS OF SHAREWARE
Workbench Booster Pack £36.95
INCLUDES WORKBENCH 3 A-Z INSIDER GUIDE, DISKS & DRIVES INSIDER GUIDE & TUTORIAL VIDEO

Disk Utilities

Amiback .... £call
DirWork 2 .... £29.99
Disk Expander £29.95
Gigamem £47.95
Infonexus NEW £25.95
Video Back-up System Phono £54.95
BACKUP HARD DRIVES TO VIDEO TAPE
Video Back-up System Scart £57.95

Hardware

Pro Grab 24RT £125.95
Rendale 8802 Genlock £159.95
Rendale 9402 SVHS £279.95
NEW !!! PCMCIA SCSI INTERFACE FOR A1200S AND A600S !
Squirrel SCSI Interface £64.95
Video Back-up System with Phono cables . £54.95
Video Back-up Scart £57.95
Vidi Amiga 12 AGA + Take2 .... £69.95
Vidi 12 Real Time £149.95
Vidi 24 Real Time £209.95
Picasso 2 + 2Mb & TV Paint Junior £289.95
Tabby Graphics Tablet £57.95
Power Floppy Drive £49.95

Databases

Datanexus NEW £24.95
Digita Datastore NEW £45.95
Sbase Pro 4 .... £139.95
Sbase Personal 4 .... £69.95

Database Applications

GB Route Plus £31.95
Mailshot Plus £35.95
Music Librarian £22.95

Plants For All Seasons £22.95
LIBRARY OF PLANTS, PREFERRED SOIL TYPES

Scanners Software

Epson GT6500 Scanner Controller Software & Cables £89.00
Sharp JX100 Driver & Cables £89.95

Software Development

Amos Professional £29.95
Amos Pro Compiler £24.95
Cygnus Ed Pro v3.5 .... £59.95
DevPac 3 .... £51.95
Gamesmith NEW £79.95
INCLUDES C AND ASSEMBLER
Hisoft BASIC 2 .... £54.95
Intos £25.95
INTUITION BASED SYSTEM FOR USE WITH AMOS
Pascal £74.95

Educational

ADI GCSE Maths £19.99
ADI GCSE English £19.99
ADI GCSE French £19.99
ADI Junior Reading £15.99
ADI Junior Counting £15.99
Kid Pix £19.95
Paint and Create £16.99
Spelling Fair £16.99
Noddy's Playtime £16.99
Noddy's Big Adventure £16.99

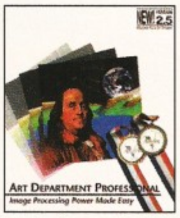
Finance Management

Cashbook Combo £59.99
Day By Day £24.99
Digita Home Office £39.95
Money Matters £34.99
Personal Finance Manager + ... £19.95
System 3E £49.99
Turbocalc 2 .... £49.95

Integrated Software

Mini Office £37.95

Image Processing



Art Department Professional v2.5 .. £139.00
AD Pro Conversion Pack £59.99
Caligari 24 .... £89.95
Caligari Broadcast v3.1 .... £249.99
Doug's Pro Control £50.95
Imagine 3 .... £99.95
Lightwave £449.95
Maxxon Magic £23.95
SCREEN SAVER
Morph Plus £129.00
Essence vol 1 + Forge £79.95
Essence vol 2 + Forge £79.95
Pixel 3D Pro II £59.00
Real 3D Classic £69.95
Real 3D V2.4 .... £299.95

X-CAD

LIMITED TO JUST 50 COPIES OF X-CAD 3000.

X-CAD 2000 .... £39.95
X-CAD 3000 .... £119.95

Music

Bars & Pipes Pro v2.5

The latest version of the most comprehensive sequencer on any platform. Contains 50 new features.

Bars&Pipes Pro v2.5 .... £199.95
Upgrade v2 to v2.5 .... £79.95

Creativity Kit £24.99
Internal Sounds £24.99
Multimedia Kit £24.99
MusicBox A or B £24.99
Peformance Tools Kit £29.99
Power Tools Kit £29.99
Pro Studio Kit £29.95
Rules for Tools £29.99
HOW TO WRITE YOUR OWN TOOLKITS FOR BARS & PIPES
One Stop Music Shop £479.99
PatchMeister £79.95
MIDI PATCH LIBRARIAN, DRIVERS FOR MANY SOUND MODULES AND SYSEX DUMPS
SuperJAM! 1.1+ £59.95
SyncPro £151.95
SMPTE TIME CODE BOX
Triple Play Plus £159.95
Aura NEW £79.95
12 BIT SOUND SAMPLER
Deluxe Music 2 .... £69.95
Megalosound Sampler £23.95
Music X 2 .... £74.95
Pro Midi Interface £19.95
Technosound Turbo 2 .... £25.95

Paint Packages

Brilliance 2 .... £45.95
Deluxe Paint 4.5 AGA £59.95
Personal Paint 6.1 .... £34.95
Photogenics £49.95
TV Paint 2 .... £169.95

WP & DTP

New Wordworth 3.1 SE

LIMITED STOCK £44.95

Final Copy 2 .... £47.95
Final Writer 3 .... £69.95
Pen Pal £29.00
TypeSmith 2.5 .... £118.95
Pagestream 3 .... £174.95
Wordworth 3.1SE £44.95
Wordworth 3.1 .... £79.95
Personal Fonts Maker £19.95

Virtual Reality

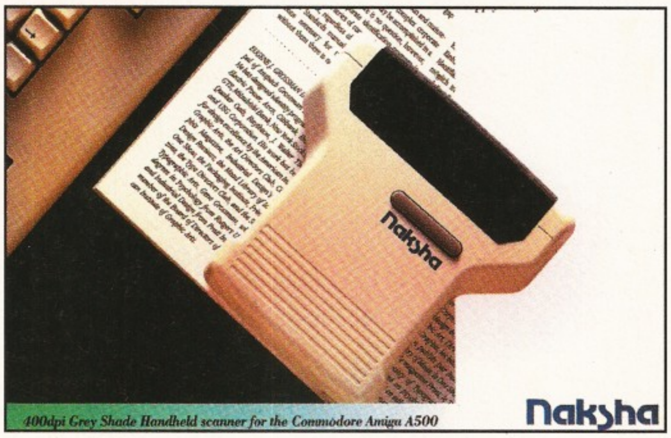
Distant Suns 5.0 .... £27.95
Vista Pro 3.0 .... £27.95
Vista Lite (only 2mb required) £27.95
Makepath for Vista £9.95
Terraform for Vista £9.95

Video Production

Big Alternative Scroller 2 .... £49.95
Media Point v3 .... £249.95
Montage 24 .... £259.95
Scala HT100 .... £49.95
Scala MM211 NEW LOWER PRICE £94.95
Scala MM300 NEW LOWER PRICE 219.95
Scala MM400 .... £249.95
Scala Echo EE100 .... £132.95
COMPLETE DESKTOP VIDEO SOLUTION
Scala MM400+EE100 .... £349.95

Workbench Upgrades

OS 3.1 for A500/2000 .... £83.95
OS 3.1 for A1200 .... £93.95
OS 3.1 for A3000 .... £93.95
OS 3.1 for A4000 .... £93.95



400dpi Grey Shade Handheld scanner for the Commodore Amiga A500

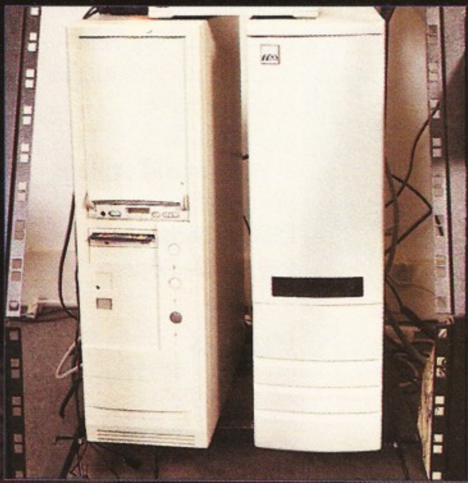
Naksha Handscanners For Amiga A500 and A500+

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These shining white cases will soon house the mighty DEC Alpha workstations.



The Premier Vision team – minus one. From left to right: Aiden, Craig, David, Andy B and Andy G.

Premier Vision

Have you ever sat down after an episode of Babylon 5 and wondered, "how do they do that"? Then, you'll going to love this account of **Graeme Sandiford's** *trip behind the scenes of a professional graphics house.*

Every Amiga-owner knows that his or her machine is capable of producing incredible graphics. We've all seen the work of professional artists and animators, such as TV series like Babylon 5 and many other visually stunning examples of computer graphics. But, how do they do it and what will you need to be able to produce professional-quality graphics of your own?

In order to find the answer for you, I packed up my bags and went to London, despite my dislike of big cities, to take a look behind the scenes of a professional graphics house. The first company that sprung to mind were Premier Vision – I'd bumped into one of the company's directors, Andrew Bishop, at several computer shows. I was amazed by the incredible things they were doing with the Amiga – everything from producing music, music videos, multimedia displays, interactive CD-ROM creations, as well as being a popular retail outlet.

This feature is based on my visit and is intended to tell you what you'll need, in terms of hardware, software and ideas, to produce graphics of the highest quality. We'll find out all about how Premier Vision started out, what they've done, how they did it and what software they use. Also, be on the look-out for boxouts – they are there to help you find out what hardware and software is recommended to produce the best results. Don't forget to check out the last page, as we reveal how this month's cover image was created.

First impressions

As I mentioned before, I've met Andy Bishop at shows such as the Future Entertainment Show and the World Of Amiga show. He's one of the most enthusiastic and out-going Amiga fans on the face of the planet – this man seriously loves the Amiga. As a result of previous encounters, I expected him to be energetic and a little over the top. What I didn't expect, was to find a company full of people that are crazy about the Amiga.

As soon as I arrived at the office, it was apparent that these people enjoyed doing what they did. At the moment, the company has six members of staff; the Directors are Andy Bishop and Andy Gould (referred to as Andy Bee and Andy Gee), Aiden – the person responsible for marketing, David – the man in charge of the company's finances, Kevin who handles video production and Craig who does just about everything else. There is an incredible atmosphere of fun, coupled with industriousness. The company is taking on an amazing amount of work, but despite having to work their collective socks off, everybody is still enjoying themselves.

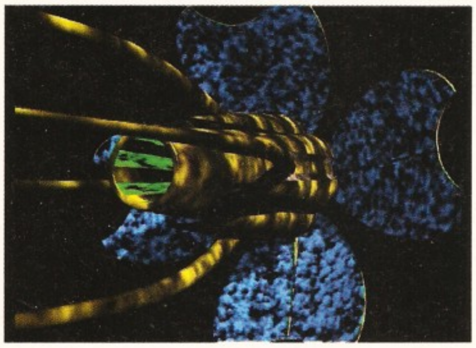
I managed to collar both Andies for a couple of hours to talk to them about how to run a successful graphics house.

So, how did it all start?

Andy B: Basically we were both friends of "Big Bad" Barry Thurston – Andy G used to do training with him and he always gave me good advice. We first met at a show. Andy G came up to my stand – I was working for Blue Ribbon at the time – and tried to "blag" a copy of Bars & Pipes; I said yes. One year later, when I was in Atlanta (USA), I got a call from Andy in the UK and we were on the phone for about an hour, talking about Bars & Pipes. Anyway, I sent him a manual and although we were working in unrelated fields (he was working on interactive programs), we bumped into each other at a few shows.

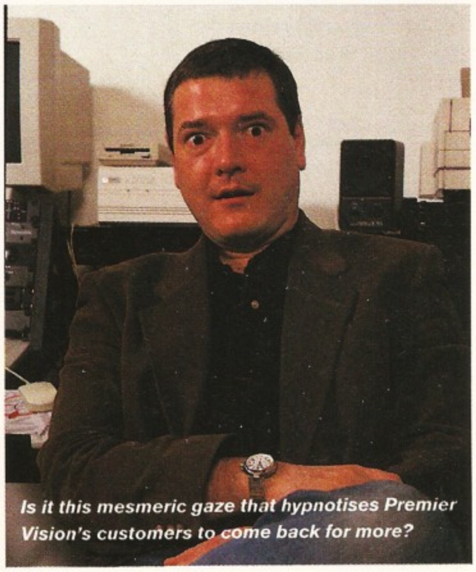
After a while I moved back to England with my wife and Andy was the first person I phoned. Anthony Jacobson of AUI (*repulsed spitting sound from Graeme*) asked us to produce an interactive CD for a Coverdisk. That became our first joint project. We learnt a great deal from that and our second was a lot better and we now do interactive CDs for a large number of different companies. That's really the basic story – do you want us to embellish on that?

Andy G: Well, as well as doing lots of interactive work, we have also sold a lot of systems. The system sales have gone surprisingly well – we really didn't go into business to sell kit. It has probably gone so well because we use the equipment professionally ourselves – when people want to buy professional systems, they want to do so from people who sort of know what they're are doing. Sorry, er... *do* know what



No it's not Babylon 5 , it's a still from the Sonic Surfers' music video, created by Premier Vision.

> "The Amiga has been the breeding-ground for some of the **greatest** graphics software."



Is it this mesmeric gaze that hypnotises Premier Vision's customers to come back for more?



they are doing. This was really the idea behind the ACE (Amiga Centres of Excellence) project, although that has come to a bit of a stand-still, due to Commodore's current situation.

Andy B: As a small side-point, we were the ones who originally came up with the ACE idea. We went up to Scala and presented the idea of forming a group of experts that could give completely unbiased advice to anyone. The idea was that people didn't have to buy from them; it was just to make sure that the Amiga was better supported at the high-end. Then, we made a presentation for Commodore and several Amiga developers and distributors. They loved the idea and called it ACE. It really took off, but although we originated the idea, the first centre was set up elsewhere.

The main reason for that was because we didn't have the premises that we have now. Anyway, the project changed and instead of having a selected bunch of unbiased people, companies could pay to become members. The sad thing about it is that anybody paying a certain amount could call themselves an ACE centre – meaning they are supposed to be experts. What would be really cool, is if Commodore get re-started and decided to get the ACE going again and picked out the people who are the *best* at what they do with the Amiga.



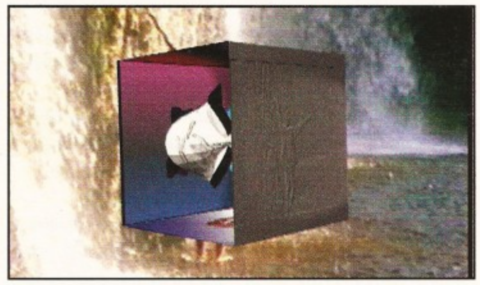
It would seem that this young lady, the lead singer of Sonic Surfers, is very pleased with her video.

I understand you also run seminars – can you tell me a bit about them?

Andy B: We've just run some LightWave seminars and we also did a big one on multimedia. We're planning to do some on music and some more on LightWave and multimedia.

What do you think has been the main reasons behind your success?

Andy B: Out of all the graphics and multimedia companies, you might come across a few who do their own graphics, some who do their own interactive CD programming, a company who can do good animations and you might even find a few companies who can do a *couple* of those things. But, between all of us, we can do all of them – we can produce still work, animation and music, and all of it to a very high standard.



Here's a still image taken from the music video Premier Vision created for the Sonic Surfers.

Another reason is that we are always straight with people. Our reputation is built on giving good service. If someone rings up for advice with software, or for a system, we try to give them the advice that is totally right for them. We make a point of saying to people that they don't have to buy from us, but, of course, most people usually come back to us.

Why have you stuck with the Amiga so long?

Andy B: Quite simply, because we love it – I



Although there are no machines in sight, both of these monitors are attached to an A4000.

Can't afford LightWave?

Although LightWave has been the choice of most professional animators, it may be beyond the reach of some people's wallets. You'll be glad to know that there are cheaper alternatives which can also be used to create stunning animations.

One of the most consistently popular programs over the years has been Imagine. It's relatively easy to get to grips with and has been used to produce some stunning images and animations.

Real 3D is another long-time favourite. It's certainly one of the most powerful rendering packages on the Amiga, although some people have found it a little difficult to use.

Although not so popular, or quite as powerful as the other two, Caligari and its pro version, Caligari Broadcast, are surprisingly easy to use. It uses an intuitive real-time interface which enables you to do your modelling and animation in an interactive 3D environment.




Here are the men responsible for the formation of what is today known as Premier Vision – Andy Bee and Andy Gee, as they are referred to in the office. Andy Gould, left, has come from a multimedia background and Andy Bishop from a music and graphics one, which I suppose could be considered a multimedia background too. Yes, they were that manic through the entire interview!

wish I had a crystal ball to see into the future to find out if we will still be using and distributing Amigas. The only problem we have working with Amigas is their speed. But, as a delivery platform, it's *way* ahead of things such as PCs. The CD32 out-performs Pentiums as a multimedia delivery platform by a long way. Unfortunately, not many people know that, but we always use Amigas when we can – but if a company insists on a PC then that's what we have to give them.

What about software?

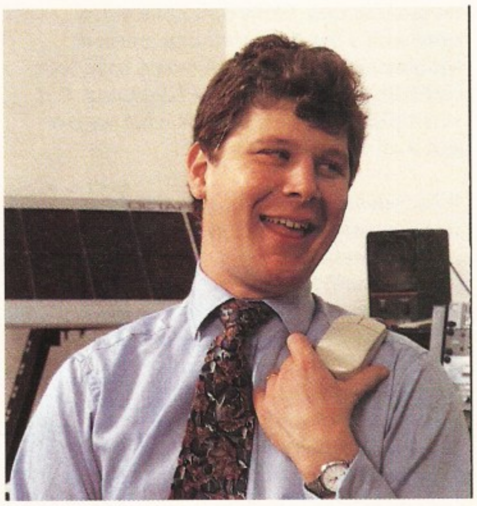
Andy G: There are plenty of excellent new products coming out. There are the new versions of AnimWorkshop and Wavemaker and a new product from Visual Inspirations called Video Effects. It's competitive with Hollywood Effects – both use LightWave to do built-in 3D DVEs (Digital Video Effects). There's also Batch Factory 2, which, I guess, is little to get excited about, but is a very good utility. It's more a functional kind of thing. But, there is a whole load of stuff coming out for the Amiga, not least of which is LightWave 4.0 which is looking really good.



This sequence was processed with ADPro and Batch Factory, using the mosaic filter.

Andy B: The Amiga has been the breeding-ground for some of the greatest graphics software. For example, 3D Studio, which is the industry standard on the PC, incorporates features that have been on the Amiga for years. On the other hand, you have this God-send which is LightWave. It comes out and repairs most of the damage done, in terms of the credibility of the machine, by Commodore US. It's doing wonderful things and, hopefully, if Commodore get their act together, it will continue to do wonderful things.

I mean, LightWave has got the simplest interface ever created – the *best* interface ever created. We know a lot of people who work with WaveFront and Soft Image, but would rather work on LightWave, because they think it's a better package. One company who will be doing a seminar with us, use LightWave on the Amiga to do their modelling and then load the models into SGIs for rendering. They could use any modeller they like, these guys do *not*



Andy Gould proves that even though he has to wear a shirt and tie, he doesn't have to be serious.

Good hardware is nothing without decent software

It's all very well having one of the best graphics machines around, but you're not going to get very far without some decent software. It comes as no surprise that the people at Premier Vision use LightWave, but what else do you need to create gob-smacking animations? We're going to help you out by listing the most useful animation utilities, along with a description of what they do and the type of project they are best suited to.

- The first recommended package is Humanoid, quite simply because it is of use to any animator who plans to have human beings in their scenes. It's a collection of highly-detailed 3D objects of human beings for Imagine and LightWave. However, it's more than that, as the objects come complete with motion paths and morphing targets. By combining these two techniques, you can simulate just about any human motion or expression.

- Surface Pro is a 'must-have' for any LightWave user. It provides an abundance of surfaces which can be loaded into LightWave and applied to objects. It combines scanned images of everyday surfaces with LightWave's procedural textures. The quality of the textures is superb and, as a bi-product, they can even help you get a better understanding of the best way to use textures in LightWave.

- Light ROM is a product that had many LightWave-users salivating for months before it was even produced. It's a CD-ROM that contains a host of objects, images and special effects, primarily for users of LightWave, but also for Imagine-users. There are some truly gorgeous models on this disc and there are lots of them too!

- Motion Master Volumes I and II are collections of animation tools for users of LightWave. Volume I has one or two useful programs, but is not really that spectacular overall, but volume II is an outstanding collection.

  Volume 2 comprises PointAt, VolumeCube, Child2World and Wobbler. Child2World can be used to separate a child object from its parent, so that both can be animated independently. PointAt enables you to target objects with other objects. VolumeCube creates quasi-random motions for a group of objects. Wobbler makes your objects wobble – no really! See page 49 for a full review.

- Forge is an innovative program, that can render Essence textures. Essence is a brilliant set of procedural textures that have been designed for use with Imagine. However, by using Forge to render them, these textures can now be used with any package – 3D or otherwise.

- An image processor is a handy thing to have around, as it can be used to apply effects, or enhance an image or an entire animation. The two favourites are ADPro and ImageFX. There is really very little to choose between – they are both well-supported and have an impressive range of features. Personally, I prefer ImageFX, but that's just my personal preference.

There are other useful programs that we haven't got space to fit in, such as 3D-object converters, so you might like to have a look through some back issues (page 106) for ones that might be of use to you.

19 worry about spending 15 grand on a piece of software, but they came to us to buy LightWave. You've got to ask yourself why?

What was it like starting up and what difficulties did you encounter?

Andy B: We were lucky – I don't think we had any difficulties. We did better than we thought, had more money than we thought – in fact, we didn't even need the DTI loan we had.

Andy G: We should have done it sooner.

Andy B: Yeah, it was a lack of balls why we didn't do it sooner. In the first months, it was a little tough living off £500 a month in London; we barely had enough to eat at times, but a few months later it went up to about a couple of grand.

Andy G: If we were to do it all again, I suppose it would have been easier with a bit more money. We've now got a video suite with a betacam and some musical equipment, so I suppose it would have been better if we had these at the beginning. But, at the time, we made do with what we had and it all worked out OK.

What advice would you give to someone who is looking to start animating professionally?

Andy B: One of the first things you should do is put together a demo tape. A low resolution HAM8 anim is fine, although a super-low resolution animation will be too chunky. Low-res HAM8 anims are quite smooth and can produce realistic playback speeds. The biggest problem is that most animators try to do things which are incredibly complicated, which of course you would hardly ever use. Most corporations are after relatively simple animations, such as logos.



Andy Bishop looking very smug. Wonder why? Read the feature!

The other thing is that when you have a film that is well-directed you see an animation of a ship, but you probably only see it in 2-second cuts. Most animators make the mistake of trying to create 30-second cuts – there has never been a 30-second special-effects cut. What they need to do is produce short animations, but at a high standard.

Andy G: We've spoken to some of the guys at Foundation Imaging, who get sent lots of tapes from aspiring animators and they said most of them are dreadful. The reason is usually because there is no attention to detail. So, I guess that's another important factor when creating a good animation.



Here's an atmospheric still taken from the Sonic Surfers video, which was produced in a week!

When you are discussing a project with a client, is it harder to find out exactly what they want, or is it more difficult to produce what they want?

Andy B: Actually, most clients don't really know what they want. If they knew what they wanted, they would probably do it themselves and not pay us to do it for them. However, sometimes they'll come to us with a general overview and then we tend to fill in the details as we go. There are two important things to bear in mind; you can look at the project as an advert to potential customers, but you must weigh that up against the amount of time you can spend on it.

We like to produce the sort of projects that when a customer sees them, they'll be gobsmacked. There's that 'wow-factor' we try to put into what we do. Although, sometimes someone might ask us to do something that they've seen in a movie – it might be something that we *can* do, but it will take too long for us to do it just right.

Andy G: Sometimes we put together a small animation, they see we can do it well and they want something more, along a similar line. Sometimes customers think they know what they want, but they don't. They might even give you quite a specific brief, we'll get on with the project for a week or two and, then, they decide to change their minds and you've wasted two weeks. So, now we don't do things on credit.



Here's a picture of the Premier Vision team – except Kevin, that is. Aren't they the "Wild Ones"?

What's the most difficult kind of animation to produce?

Andy B: It has got to be rotoscoping. If you are trying to composite live action with rendered animations, you have to get everything spot on, or people will know that something is wrong – they may not know *what*, but they will know.

For example if you are combining a sequence of a man walking through a room with a rendered floating ship, or something, you have to shoot the room twice. You'll have to shoot it with the man walking through and one without. If the camera's position moves even a fraction of an inch, you have to repeat that movement exactly.

That's one reason why in motion picture effects people use short cuts. In films like Jurassic Park, it may look as if you are watching a long sequence, but that's only because it's done so cleverly. Then, you've got to get the shadows right in LightWave – it looks cool when it's finished, but the whole thing is a nightmare!



Finally, what is the most important factor in making a great animation?

Andy B: There are two rules of thought on this. One is being subtle with effects so that they are not completely over the top. For example, in scenes involving a spacecraft, where everyone is sick to death of lensflares, don't use a 100 per cent setting – just a slight lensflare to add a bit of realism, or even mix different types. It's the tiny details that are the key to making things look realistic.

However, there *are* times when you need to go completely over the top. A good example of this was when we created the music video to Sonic Surfers' new song. A lot of people who will be watching that will never have consciously seen a lensflare – so the lensflare value was pushed straight up to 200 per cent!

In the end it's a matter of using your efforts in the best possible way. Sometimes, even the simplest object can look good with the right textures and lighting. On the other hand, you could spend a week building an incredibly detailed ship, but if the light doesn't show it up, or if it moves around the screen like a brick, then you have wasted your time. ■

Get equipped with the right hardware

Despite what most people would like to believe, you can't create Babylon 5-like animations on an unexpanded machine. It's simply not possible – you need extra speed, extra memory and a reasonable amount of storage space. Admittedly, these don't always come cheaply, but you make a saving in the amount of time you'll have to spend on projects – time, after all, is money.

If you don't have an AGA-equipped Amiga, you are going to need some sort of display enhancer, such as a graphics card. These have fallen in price since the introduction of the AGA-chipset and you can now pick them up quite cheaply. Some of the more popular boards include the Picasso, Retina and the EGS Spectrum. They are still of use to 4000-users, as most of them have optional composite outputs and other handy features.

Another piece of hardware, which is also very useful, is the PAR card. The PAR card fits inside a big-box Amiga and provides video-quality playback from hard disk.

If you are going to undertake *really* big rending projects, you'll no doubt benefit from the power of a dedicated rendering engine. Premier Vision will soon be stocking a new range of rendering engines, based on the DEC Alpha family of processors. They are ludicrously fast – running at speeds between 166Mhz and 275Mhz!

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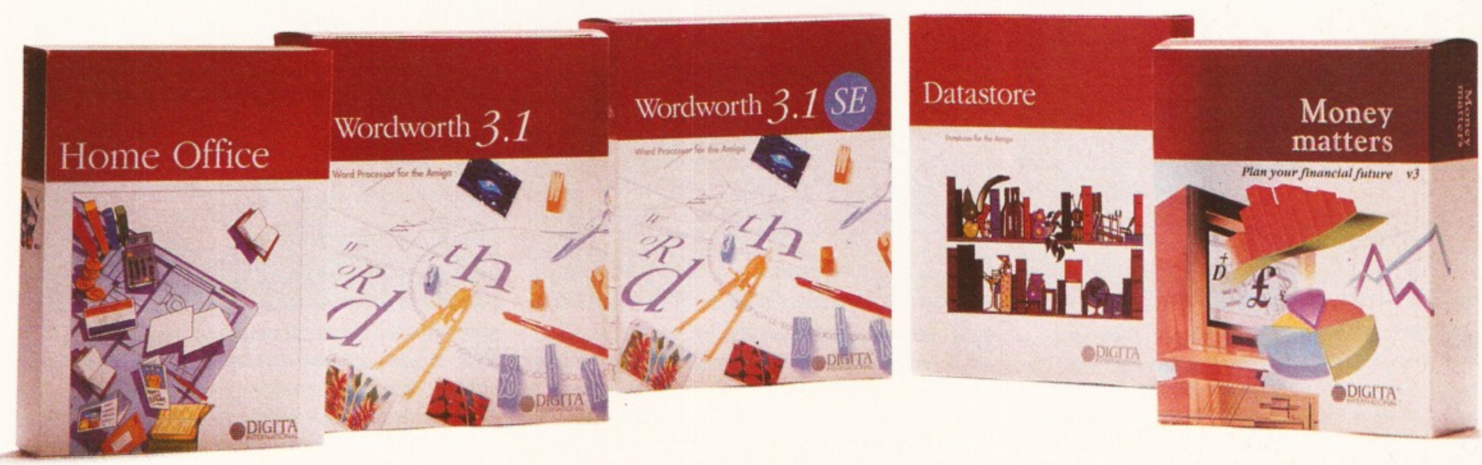
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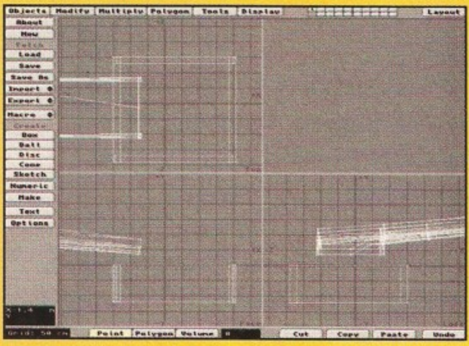


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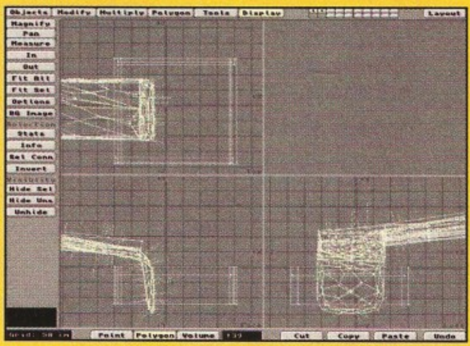
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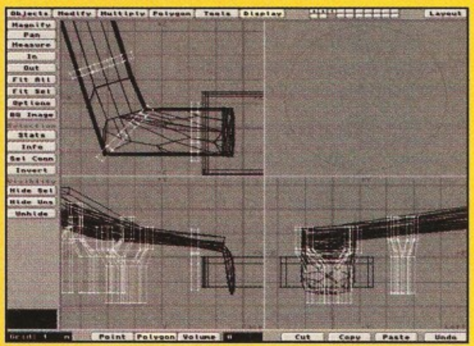
How the cover was done



1 *After deciding that we were going to pay homage to James Cameroon by creating a Terminator 2-style image – with lots of silvers and glowing orange – we set the cover image in a foundry. So, the first task was to model the pool and chute that hold the molten metal. The pool is a cube with a hollowed out centre, the chute is a more oblong shape which has been bent.*



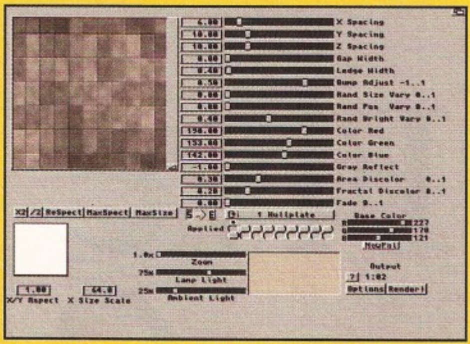
2 *The next step was to create the molten metal. Once again, the basic model is based on a cube that has been stretched and angled to fit the chute. To give a more rounded and liquid look, I performed a Metaform subdivide. This multiplies the number of polygons, while smoothing them and giving the object a blobby appearance. I then gave the polygons the name 'molten metal'.*



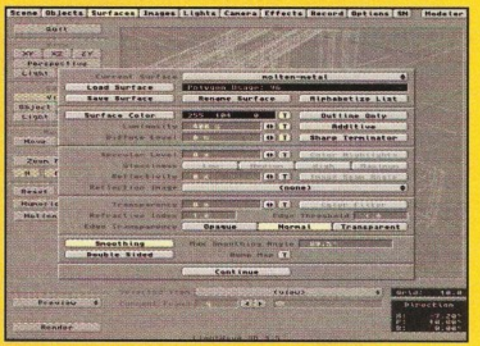
3 *Obviously, the chute would look a little odd suspended on nothing – not to mention unsafe! So, I built some supports – yes, you guessed it, they started out life as a cube. The cube has several sections, which gives scope for moving the polygons around to produce a rough Y shape. Next, I gave the surface the name 'old-metal' and then cloned the original and positioned the clones.*



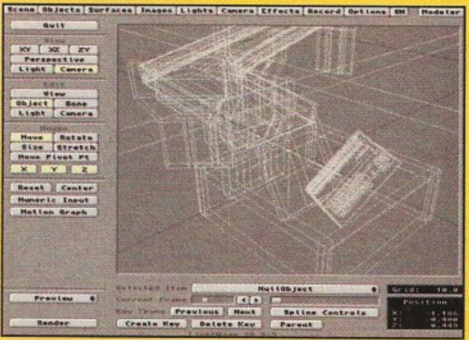
4 *After all the modelling is finished, it is time to start on the object's surfaces. For the surfaces of the chute, pool and supports, I decided to go for a rusted-metal look. As luck would have it, I reviewed the Pro Textures Combo Collection this month and it has a nice scanned sheet of rusty metal. I applied this to the old-metal surface as a cubic map.*



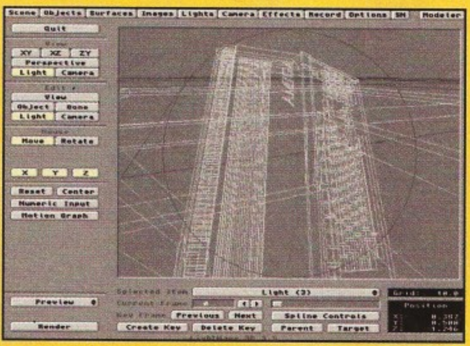
5 *For the floor of the foundry, we went for ceramic tiling. It is possible to create this surface in LightWave, but there are nice Essence II textures that would be perfect for the job. Using Forge, I loaded it up, changed its colour from blue-grey to a light brown and then rendered it as both a colour image and a greyscale one to act as a bump map.*



6 *The molten-metal is the last and trickiest surface. I was looking forward to this, because it's more of a challenge as it needs to glow a little and is created totally in LightWave. The basis for this surface is the Fractal Noise texture. It's used as a colour, luminosity and diffuse level map. If I'd had the time, I would have created a translucent glow around the chute and pool.*



7 *After the surfaces have been set, the next task is to set the camera angle. I got together with Nick, our Art Editor, as we needed to accommodate the Coverdisks, coverlines, Shopper logo and headings. This means that the focal point of the image has to be in the bottom-right corner. To get the view we wanted, I created a null-object and targeted it with the camera.*



8 *The next step is to set the light of the scene. As far as we are aware, foundries are usually dark places and the main source of light is the molten metal. This means that the main light source should have a reddish-yellow colouring – the same as the molten metal. We also added a yellow light in the pool of metal and a spotlight aimed at the Amiga.*



9 *Next we set about rendering the scene. It's done super-low res, so that we can check the light of the scene to ensure it won't be too dark and that the surfaces appear as expected. Most of the time, the camera was only in realistic mode. When we are happy with it, we set A4000 040 rendering at medium res – the image used on the cover took about 13 hours to render.*

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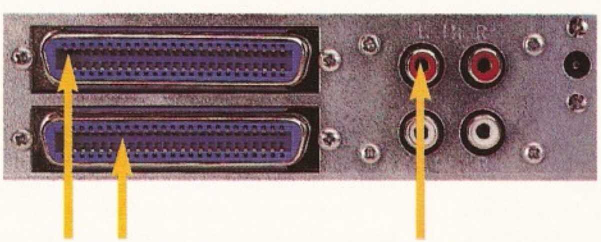


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The CD-ROM comes complete with PSU, manual and a useful range of software utilities: Audio CD, CD32 Emulation, MPEG Film Decoder and PhotoCD software.

COMPARISON CHART

	POWER	OTHER
DOUBLE SPEED, MULTI SESSION	✔	✔
MAX TRANSFER (INTERFACE)	3MB	1.5MB
CD32 EMULATION	✔	✔
NUMBER OF SUPPORTABLE DEVICES	7	1 OR 2
THRU PORT FOR ADDITIONAL DEVICES	✔	-
HIGH QUALITY METAL CASING	✔	-
FULLY SUPPORTS 'HOT UN-PLUG'	✔	-
AUTOMATIC BOOTING OF CD-ROMS	✔	-
CD + AMIGA SOUND MIXING FACILITIES	✔	✔
COMPATIBLE WITH ACCELERATOR CARDS	✔	?
12 MONTHS WARRANTY	✔	✔
COMPLETE WITH UTILITY SOFTWARE	✔	-
COST	£199	£199

Prices for Amiga 600/1200

Double - Speed
CD-ROM £199

Quad - Speed
CD-ROM £299

Amiga 4000 Version
CD-ROM ....£POA

80 WATT
SPEAKERS
£54



Trade and Educational orders welcome - Worldwide distribution available



Straight talk

Our man in the US, **R Shamms Mortier,** *has a heart-to-heart chat with Jeff White of Visual Inspirations.*



Jeff White, the inspiration behind Visual Inspirations, peers through from an Amiga dream.

"If the Amiga technology is available to more companies, more people will see the **advantages** that we have known all along."

Visual Inspirations are the company behind products such as Transporter, Pro Textures (see page 48 for a full review) and Mailing List Manager. They are also responsible for many other products, as R Shamms Mortier discovered when he visited the man at the helm of Visual Inspirations, Jeff White. The following is a record of their conversation...

How long have you been associated with developing software for the Amiga?

Well, I bought my Amiga in early '86. I started writing software in Amiga BASIC. I released a few shareware programs in BASIC that had sound, graphics and such. It was fun, but limited. I had bought an Amiga because I wanted to do graphics.

I looked for a long time for a programmer that would let me do the graphics for the interface and let him or her do the rest. Well, after not being able to find anyone that was interested, I decided to learn C and do it myself. I have been using it ever since.

I understand you have a previous association with the Amiga community in England. Can you give us the details on what that was and how it came about?

At the same time as I bought my Amiga, I helped start a local Amiga user group, called the Tampa Bay Amiga Group (TBAG). I was elected President and decided to put together a disk of Public Domain programs for each month's meeting. Everything had icons and documents and soon became very popular with new users everywhere.

I later wrote a custom interface called Activator which allowed you to run all the programs from its screen. It seemed that most of our orders were from England and most of the PD houses there carried the collection. I always chuckled that it must be because they like tea so much that TBAG became so popular.

I also wrote quite a few shareware programs that got passed around. Some of the most popular were Showiz (a picture display program) and CLI Wizard (a DirOpus type program). One thing that almost every Amiga user has probably seen is a little icon I did. It was a little book that said Doc File on it and when you click on it, it will open.

Fred Fish started using this icon on the Fish library for his text files – then, just about everywhere I turned it was showing up on other disk magazines and a lot of commercial software. If I only had a penny for every time I saw it...

What are the most exciting features of your latest wares?

I guess I have to start with our first product which was Pro Textures. Leo Martin is a superb graphic artist and put together this collection of 24-bit real world seamless images. No matter what shape or size object you have, you will never see a seam. The Flagstone, Brick, Fire and Marble are my favourites.

Transporter was our next product, supporting more display devices and single frame controllers than any other program in the galaxy! It basically automates single frame controlling, rotoscoping and batch processing.

Another product is Mailing List Manager which is basically designed for mailing lists, but can be customised by the user for just about any application. It also allows you to link into ProPage and PageStream for more printing options.

Next up, we have Artwork's Clip Art Library – most Europeans are already familiar with this product, because the company is based in England. We are the distributors in North and South America. If features super clip art, covering just about every subject.

Then there is Batch Factory which is based on routines in Transporter that were made into a standalone product. It has over 350 scripts that cover almost every product that supports ARexx. It makes batch processing very simple.

Digital Sound Track is the audio version of Transporter. It allows you to add sampled sounds and MOD files to your videos and animation. It gives you full control of your VCR or PAR board with Picture-In-Picture support for both Opal and IV24 boards.

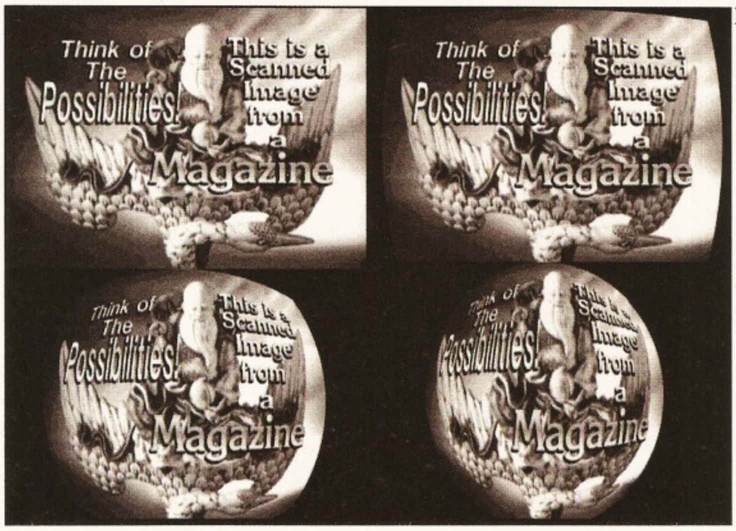
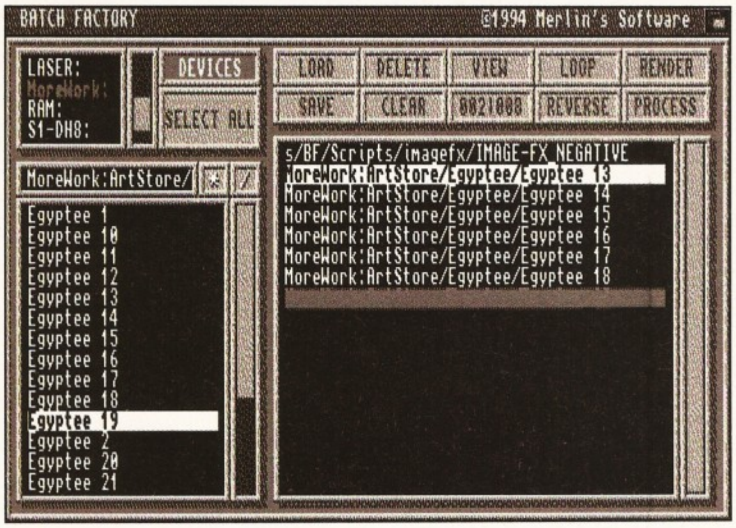
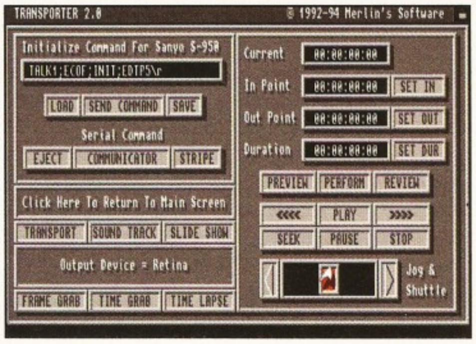


Image processing done in ADPro and processed through Batch Factory.



The main Batch Factory interface screen, making batch processing very easy.



Transporter's action interface, automating single frame controlling, rotoscoping and batch processing.

Another product is RoadSigns by Jose Burgos – a collection of Road Signs for LightWave. Over 50 different objects, plus a construction kit which allows you to add the text for an unlimited amount of signs.

Surface Pro by Leo Martin is based on his Pro Textures series, but takes up much less memory and includes over 60 new surfaces for LightWave. Although Pro Textures can be used by any 2D or 3D program that supports 24-bit images, they are specifically made for LightWave.

Where did the idea for Transporter come from and how do you think this version differs from its first inception?

NewTek had just released the Toaster and Leo approached me with the idea to automate the process of single framing. I loved the idea and we just kept adding ideas to it. The first support was for the Toaster and the VLan controller (because that was all the equipment we had).

I started adding more display devices and controllers to it. Then, the other routines came – sequential frame grabbing, time lapse, slide show and batch processing were all added before the first version hit the shelves. Since then, we have added a few more goodies and support for just about every display device and single frame controller on the market.

How long has Visual Inspirations been in operation and where is it going in terms of development and marketing?

I started Visual Inspirations in June 1993. We released Pro Textures and Transporter through another company, but had problems with them and I decided to go it on my own. I was a professional magician for seven years (which is where the name Merlin's Software came from). I wrote five books on magic tricks that I had created and lectured on around the US.

The name of my first book was Visual Inspirations and I had always loved that name, so when I started the new company, I wanted a name that did not limit us to just software (like Merlin's Software) – so, Visual Inspirations was born. We still copyright the products under Merlin's, but the parent company is VI.

As far as future development, I am one of those, so-called, Amiga fanatics and as long as we can earn a living making products, we will (and I feel that will be a long, long time).

Has the dissolution of Commodore affected your operation?

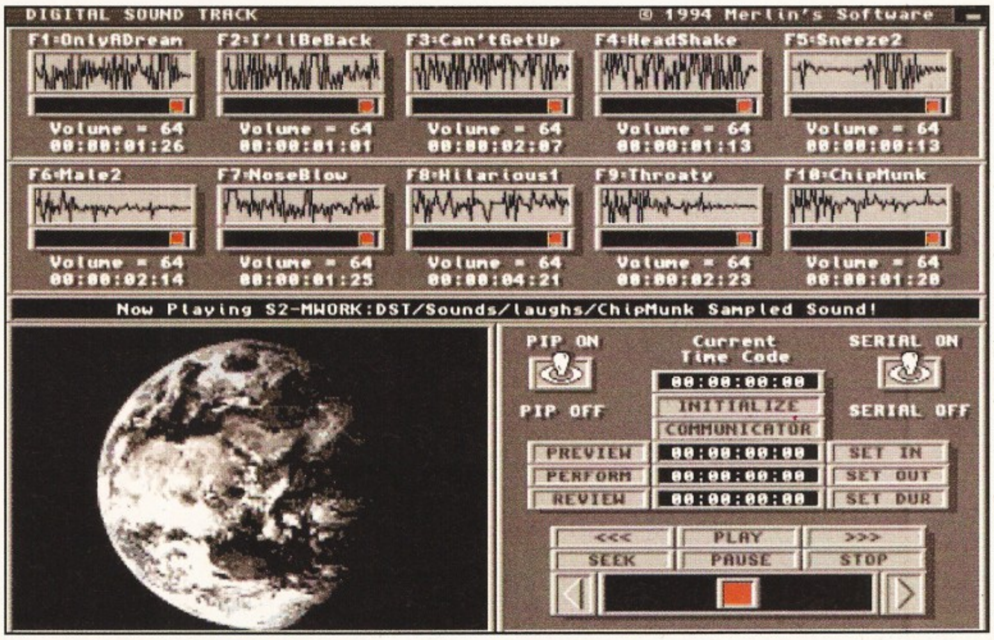
For about a month after the announcement business almost came to a halt, but after the initial shock was over, orders started coming in again and it has been better than ever.

Commodore was a major obstacle from the very beginning, but now that they are out of the way, I feel that whoever takes over will do a much better job (they can't do any worse). The Amiga Operating System (OS) is one of the best and I would hate to have to leave it behind.

Where would you like to see the Amiga head at this point if, and when, another corporate entity takes over?

I think this is the best thing that could have happened. If the Amiga technology is available to more companies, more people will see the advantages that we have known all along – an Amiga card for the PC, TV tabletop boxes, etc.

The OS is just too strong to kill off in my opinion and I look forward to a brighter tomorrow. ■



A picture of Visual Inspirations' Digital Sound Track with the Picture-In-Picture display turned on.


SONIX
VOLANTE FAST
TST AA CD OH RD SD TR MR SP
MultiModem
MultiTech
U.S.Robotics
COURIER
MR HS AA CD OH SD RD TR PWR
Data/Fax Modem
MS134 VF
Modular Technology
SupraFAXModem V.32bis
POWER
Fax Modem

Modem mania?

Fancy getting on-line? **Richard Baguley** *and* **Clive Parker** *look at the state-of-the-art in modems.*

The benefits of being on-line have been explained in great detail in a number of articles recently, so I'll spare you the hype. Let's just say that if you aren't on-line, you aren't even in the running for the coveted title of "Person most in touch with the cutting edge of technology".

Anyway, if you want to find out what all of this "Information Superhighway" stuff is about, you are going to need something to get you on-line – a modem.

For those of you who haven't come across the term before, the name is an abbreviation of "modulator-demodulator". What it does is take the digital information that your computer sends and turns it into a hideous squealing noise, somewhat akin to a pig being poked with a pointy stick. The modem at the other end of the phone-line listens to this noise and transforms it back into digital information, which is received by the remote computer.

Of course, the process is (like all things computer-based) a lot more complex than this. For instance, there are a variety of different types of modems which can send data at different speeds. See the box headed "Sod the standards" on page 31 for more details.

Supra Fax Modem 288

We were hoping to review this modem in our Supertest, but this was, unfortunately, not possible. Supra initially shipped a V-Fast model with the promise of a simple upgrade to the full V.34 standard. However, when the V.34 standard was finalised, it emerged that the upgrade would involve replacing one of the chips, a process which could only be carried out by Supra, or a dealer with the necessary equipment.

Supra have now started shipping a full V.34 model, but many dealers have had problems getting hold of them. One dealer told me that a shipment of Modems they received was composed of a mixture of V-Fast and V.34 models. As nobody wants to buy the V-Fast class Modems, now that the V.34 models are available, the dealer was not amused, to say the least.

Unfortunately, we were not able to get hold of a V.34 model and we felt it was unfair to review a V-Fast model when it is due to be replaced by a new model. So, this modem has not been awarded a percentage mark, although you will find full details of the specifications of the modem in the box headed "V for validation" on page 32. Rest assured that as soon as we can get hold of a full V.34 model, we will review it in these pages. You should also note that all of the Supra Modems are not BABT approved. See the box headed "Approving noises" for more details.

Anyway, what we have seen of this modem shows that its construction quality is up to Supra's usual high standard, with a thick metal case and a LCD display on the front which gives information on the status of the modem. There are also a selection of lights which give further information.

Supra Fax Modem 288

"We were unable to do a full review, but it certainly looks like it will continue Supra's important position in the modem market."

Price: £229.99
Supplier: First Computer Centre
Contact: 0113 231 9444

Verdict: n/a

Supra Fax Modem V.32Bis

This modem has become something of a classic. Although it is not BT approved, it has been a best-seller and has found use on many prominent BBSs. Early models did

▶ 28

"If you want to find out what all of this **'Information Superhighway'** stuff is about, you are going to need something to get you on-line – a modem."

V-Fast versus V.34

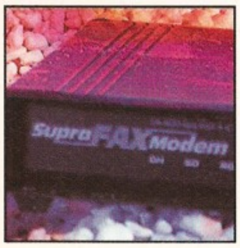
The newer modems in this Supertest are either V-Fast class or V.34, but what is the difference? Well, the V-Fast standard was designed as an intermediary, while the V.34 standard was being finalised (see box headed "Sod the standards" on page 31).

In practice, this means that there is very little difference between a V-Fast class modem and a V.34 model. A V.34 modem should have no problem talking to a V-Fast model and our experiments revealed that this was in fact the case.

The two protocols do differ, but the differences are pretty minimal, so you should not necessarily be put off buying a V-Fast modem purely on the grounds that it is V-Fast only.

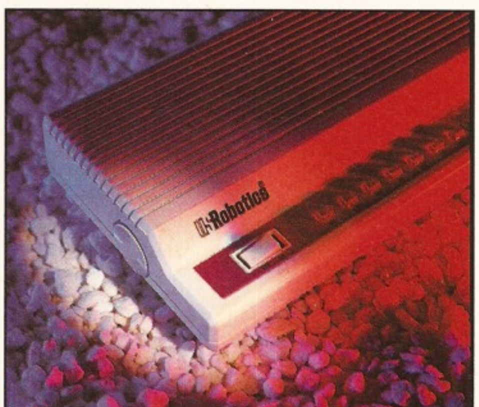


Courier Dual Standard V.32.



Supra Fax Modem.

"This means that there is very little **difference** between a V-Fast class modem and a V.34 model."



US Robotics 14,400 Sportster.

suffer some problems, with many users complaining of unreliable connections and poor behaviour on bad telephone lines. However, a number of ROM updates have solved most of these problems, although it does occasionally still refuse to connect with some telephone exchanges.

It's certainly well constructed, with a tough metal case which should shrug off most things you could drop on it (with the possible exception of the 16 ton weight, beloved of cartoon characters). The only real complaint is that the plastic cover at the front of the case is a bit flimsy and does not offer *that* much protection to the LED display behind it. This display gives you information on the status of the modem (showing AA if the modem is in auto answer mode, or DI if it is dialling) and four lights give you a good idea of how your call is progressing.

There is also a pizeo electric speaker on the underside of the modem which is used to monitor the call. Using a pizeo electric speaker helps keep the cost of the modem down, but the pathetic, tinny noise which emanates from this is incredibly irritating. Unlike the US Robotics modems, there is no volume control, so I ended up turning the speaker off. Although this solved the problem, it did mean that I could not really monitor the progress of the call, which was a pain.

At the rear of the modem are the standard connectors (power, serial port, phone line and a pass-through for a phone handset or answering machine). Connection speeds of up to 14,400 bits per second (not counting data compression) can be achieved, but if the quality of the phone line does not permit it, the modem will happily work at a lower speed.

The modem supports Group III fax send and receive and there is a special version of GP Fax designed to work with this modem. In use, this modem performed well, although it did seem a little more eager to slow the speed of the connection down on a bad telephone line than some of the others.

However, it's certainly no slouch in the performance department. It's not exactly state-of-the-art, but it is now at a good price and should continue to be held in the high esteem which it has already earned. If you are looking for a cheaper option, the LC version of this modem (which lacks the LED display and only supports Class 1 fax commands) is available for £33 less.

Supra Fax Modem V.32 Bis

"Technology may have moved on, but this modem remains an important player in the modem market."

Price: £169.99 (£136.99 for LC version)
Supplier: First Computer Centre
Contact: 0113 231 9444

Verdict: 85%

Frontier XL28E

Frontier continue their tradition of seemingly meaningless names for their range of low-priced, but powerful, high-speed modems with the XL28E.

Actually, the name isn't completely devoid of meaning – the '28' in that snappy string of digits indicates that it's capable of shifting data over the phone lines at a zippy 28,800 baud – twice the speed of your average fax-modem.

Oh, yes, the 'E' means it's an external modem. The XL28E is one of the first low-cost V.Fast modems on the market. And if you think that £250 isn't particularly low-cost, take a look at the prices of the other 28,8000 modems.

A wonderfully sleek, black case houses the modem and it stands neatly on its edge next to your Amiga. Instead of the usual row of rather bizarrely marked LEDs, there's a neat icon panel that lights up to let you know exactly what's going on – much needed at times. Apart from the power switch, there are no other buttons, knobs or switches to fiddle about and get confused with on this modem. Hurrah!

But the XL28E isn't just a sleek, gleaming, black box. There's a powerful communications engine tucked inside, just begging for you to plug it in to your Amiga.

Even though the XL28E is a V-Fast modem, not a V.34, we had no problems at all connecting to any 28,800 baud on-line services using it. To get it up and running, we just plugged it in and used our existing modem settings and Comms software.

Within a couple of minutes, we were connected to CompuServe – it was that simple. The XL28E handled everything we threw at it perfectly, even connecting to a couple of US 28,800 boards first time without any problems.

Just because a piece of kit looks good, it doesn't necessarily mean that it's going to be the best of the bunch. In this case, however, Frontier have combined good looks and good engineering – merged seamlessly together to present a powerful and inexpensive modem.

If you need a 28,800 baud modem right now, this is the one to get.

Frontier XL28E

"It looks good, has lots of flashing lights and even works well. What more could you want?"

Price: £257.33
Supplier: Electronic Frontier
Contact: 01734 810600

Verdict: 90% Star buy

Courier Dual Standard V.34

With the Courier Dual Standard V.34, US Robotics are one of the very first manufacturers to come up with a true V.34 modem that conforms exactly to the V.34 specifications.

The Courier is traditionally styled. It's a large, flat, black plastic box with a fantastic array of red LEDs across the front panel, all marked with the usual baffling two and three letter legends, informing you about MR, DTR and so forth. With this styling, you'd almost

expect to plonk your phone on top of the Courier, just like in the good old days of Comms.

US Robotics have kept the number of physical controls on the Courier to a useful minimum. The only control on the rear panel is the power switch, while a Voice/Data switch gracefully adorns the front panel alongside a cleverly hidden volume control. The usual phone and line sockets are tidily tucked away at the back of the modem.

Getting the modem up and running is dead easy. US Robotics have thoughtfully supplied a quick reference guide for those eager to get on-line straight away. Following the guide, you can just plug the Courier in and power up your system. There's also a large, comprehensive and very technical manual for those who like to start messing about with S-registers and other arcane modem settings. It's really best to leave that kind of thing alone, unless you really do understand Comms.

Connecting to BBSs and services is easy. In most cases you just have to select the US Robotics Courier option from within your Comms software. Over a couple of days we used the Courier for a variety of uses, including connecting to CompuServe, CIX, a couple of BBSs and the Internet. In all cases, it worked perfectly.

As with most US Robotics modems, the Courier uses flash ROMs. This doesn't mean that they're hyper-fast, or send out beams of light, or anything like that. It means you can download the newest version of the ROM software and install it into the modem to make sure it's fully up-to-date. This is great for sorting out bugs in the ROMs – instead of physically replacing the chips, you just replace the code. Not that there are any bugs in the code. Perish the thought.

The Courier is great because it's easy to set up and easy to use. It loses a few marks because of its high price – nearly six hundred quid – and the plastic case, but, if you get the Courier, you won't be disappointed with it. You should also shop around – we have seen this modem advertised for as little as £316.99. If you are planning some heavy use (such as a modem to use on a BBS), then this is the one I would recommend.

US Robotics Dual Standard

"An extremely powerful, reliable and generally cool modem. Expensive, but ideal for heavy use"

Price:	£586.33
Supplier:	US Robotics
Contact:	01753 811180

Verdict: 90% — Star buy

MultiTech MultiModem II

The MultiModem II is blessed with the build quality of a Chieftain Mk 2 tank and is about as aerodynamic as a large, square thing. If you want a good, solid, workmanlike modem, then this is the one for you. If you want a thrilling, sexually attractive modem, then look elsewhere.

Tucked away inside the solid metal case is a modem to rank with the best – after running all day non-stop, the modem was as cool as when we first switched it on. There'll be no jokes about frying eggs when you use this beast.

The ubiquitous long line of LEDs on the front panel blink insanely at you when you are on-line, almost as if they expect you to be able to discern some meaning in their flashing. MultiTech have decided to do away with almost all external controls, the MultiModem II simply has an awkwardly placed power switch on the back panel and a Voice/Data switch alongside the 14 LEDs (count 'em) on the front panel.

The MultiModem II performs brilliantly. We had less problems setting up and running this modem than any of the others – without even looking at the manual. The manual supplied is the size of a small Bible and is probably the most comprehensive guide to using modems ever written.

We connected to several BBSs, CompuServe and the Internet without any problems at all. Data transfers were performed without a hitch at all speeds up to 28,800, and we had no problems connecting to slower services. It even worked well with a dodgy phone line, which is more than can be said for some of the modems featured in this Supertest.

The MultiTech II is designed as a professional V.34 modem, that's why it's so rugged and expensive and will probably last longer than your Amiga. So, in spite of the expense, it's well worth considering.

MultiTech MultiModem II

"Professional, solidly built and expensive. Plenty of flashing lights and incredibly solid construction."

Price:	£821.33
Supplier:	PPCP Limited
Contact:	0181 893 8877

Verdict: 75%

Interdial M5134

The Interdial M5134 is an easy to set up modem that you can use to replace your existing modem just by plugging it in. Your existing Comms settings should work without any problems even at 28,800 baud.

The Interdial is a neat little modem in the traditional style, a sturdy slab-shaped metal case, big enough to sit under your phone, or an external CD-ROM drive. Nine LEDs are studded along the front panel, so you can be sure of the status of your call, as long as you know what all the lights mean!

The only control is the power switch on the rear panel, and the only connections are the serial port and the telephone line socket. It's all very easy to set up and use.

The manual is rather technical, but can be largely ignored, unless you really want to get into messing about with the internal settings of the modem. As usual, fax software for

"Just because a modem looks good, doesn't necessarily mean that it's going to be the best of the bunch."



MultiTech MultiModem II.



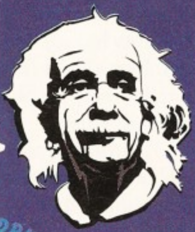
US Robotics 28,800 Sportster.

Approving noises

One of the issues about using modems which concerns many people is BABT approval. The situation is relatively simple: under the terms of the 1981 Telecommunications Act, it is an offense to connect any device to the public telephone network which has not been approved by the appropriate body. In theory, the penalty could be a significant fine. The body which deals with approving modems is the BABT. When a modem is submitted to them for approval, they carry out a series of tests to establish that the modem is not likely to damage the phone network. The functionality of the modem (i.e. how good it is) is not tested by this process, so BABT approval does not necessarily have any implications for the quality of the modem.

The cost of the approval process can be high, and this is why some manufacturers do not put their products in for approval. Many manufacturers maintain that their tests are more comprehensive than the BABT tests, thus rendering them invalid.

The fact of not being approved does not seem to have affected the sales of many modems: the Supra Fax Modem V.32bis is not approved, but it has long been a best-seller. Although connecting this phone to the network is technically an offense, I am not aware of anybody ever being prosecuted for this. Many popular BBSs have been using these for several years without being cautioned or prosecuted by BT, so it would seem that this is not high on BT's list of priorities. Perhaps they are too busy counting their profits from their grossly inflated prices...

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If you're thinking about buying a new peripheral for your A1200 or A600 then … *don't* … until you've considered our brand-new, plug-and-play SCSI 2 interface and our exciting range of modern storage devices.

Named after the famous storage-hungry animal, the Squirrel™ SCSI 2 interface simply plugs into your PCMCIA slot and allows you to connect up to 7 (yes, 7!) SCSI devices to your Amiga at the same time. Just think of it, a triple-speed CD-ROM, a SyQuest™ removable drive, a DAT drive, a Magneto Optical and a Tape Streamer, all on-line and all available at any time!

All this is a reality with the amazing Squirrel™ SCSI 2 interface.

The Squirrel comes complete with SCSI software drivers, a host of useful SCSI programs (audio CD player, CD-to-HD sampler etc.) and is also extremely compatible with the CD32 so that, with a suitable CD-ROM drive, you can run games like Diggers, Brutal Football, Liberation, Pinball Fantasies etc. etc.

But there is much more to SCSI than CD-ROM; SCSI is an industry-wide standard which means that you can plug any SCSI external device into the Squirrel interface and daisy-chain units together. No longer are you forced into a closed solution - with Squirrel, your Amiga will grow with your needs.



the neat Squirrel SCSI interface

Incredibly, the Squirrel SCSI 2 interface costs only £69.95 including VAT and is available now from all good Amiga suppliers or directly from HiSoft.

To complement the Squirrel interface we have released a number of quality peripherals - professional *Squirrel Storage Systems*™ at nutty prices!

Squirrel Storage Systems

Squirrel Storage Systems come either bare (int - ready for installation internally) or fully-cased (ext) with integral power supply, SCSI in/out, SCSI ID selector and audio out (for CD-ROM). The cases we use are high quality, shielded, snap-together enclosures, each with 40W power supply. These are available separately at £69.95 each (specify 3.5" or 5.25" when ordering).
All prices include VAT!

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The SuperTriple™ CD-ROM drive offers 510Kb/sec transfer, 190ms access, tray-loaded, PhotoCD™ multi-session, CD32, CD-DA & more; a brand-new, super-fast, feature-packed unit at a fantastic price…
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Transportable storage is here with the solid, proven SyQuest™ 88Mb and 270Mb removable drives. Great for backup and moving your work between machines…
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Drive prices include 1 free cartridge.
Extra cartridges: 88Mb cart £59, 270Mb cart £59

SCSI Hard Drives

Modern, fast (11ms seek) hard drives, all with 128Kb cache, at great prices…
540Mb int **£259**, ext **£319**, **730Mb int £299, ext £359**.

We can supply all necessary leads, terminators etc. Please feel free to discuss your exact requiremnts with our friendly, technical staff.

Ordering Information

All HiSoft products (see the complete list below) should be available through your favourite Amiga dealer. If you have difficulty in obtaining any title you can order directly from HiSoft - just call us free on 0500 223660, armed with your credit or debit card; we will normally despatch within 4 working days (£3 P&P) or, for £6, by guaranteed next day delivery (for goods in stock). Alternatively, you can send us a cheque or postal orders. All prices include VAT. Export orders: please call or fax to confirm pricing and postage costs. © 1995 HiSoft. E&OE.

HiSoft products for your Amiga: Aura 12/16 bit sampler - £99.95, Megalosound 8 bit sampler - £34.95, HiSoft Devpac 3.14 - £79.95, HiSoft BASIC 2 - £79.95, HighSpeed Pascal - £99.95, Gamesmith - £99.95, Termite - £39.95, Twist 2 database - £99.95, Maxon Magic - £29.95, Upper Disk Tools - £14.95, VistaPro Lite - £24, and more.

HiSoft SYSTEMS

The Old School, Greenfield
Bedford MK45 5DE UK
Tel: +44 (1525) 718181
Fax: +44 (1525) 713716

29▶ Windows and DOS is supplied as standard and is completely useless for your Amiga. Fortunately, there is plenty of PD software available (such as the excellent Comms program NComm), so this isn't a real problem. See the box headed "The PD Connection" for more details.

In use, the modem worked perfectly at all speeds up to 28,800 bps connecting to BBSs, the Internet and sending faxes. The built-in PSU means you don't have to mess with external power supplies. Even though there is a fairly hefty power transformer inside the case, the M5134 stayed really cool even when it was left running all day. The M5134 is a reliable and sturdy workhorse of a modem that won't let you down.

Interdial M5134

"Traditional, but well done. The sort of modem that you can plug in and forget about..."

Price: £293

Supplier: Modular Technology

Contact: (01869) 321323

Verdict: 75%

Sonix Volante Fast V.34

Now this is a tasty looking modem. In fact, it could possibly be called the "modem of the Nineties". Designed to look like an external 'mini-tower' hard drive, the Sonix Volante Fast stands upright on a pair of feet and adds a very professional air to your Amiga set-up.

Although it has a price-tag out of the reach of most home Comms users, the Volante Fast is housed in a plastic case. Admittedly, it's a large, well designed plastic case with loads of features, but... a *grand*! For almost a *thousand* pounds, you expect something that feels a little more substantial.

Unlike any other modem we've seen, the Volante Fast doesn't rely on the usual line of red LEDs on the front panel. Instead, a large LCD screen at the top of the front panel displays the status of the modem and lets you know exactly what's happening during your on-line session in plain English. Modems such as the Supra rely on you knowing what certain mnemonics mean (such as DI, AA and 28), but the Volante tells you exactly what is going on. None of that tiresome technospeak here! There are, of course, a group of nine LEDs below the LCD screen as a back-up, just in case you can't figure out what 'connected 28,800' actually means. Oh well.

A nice touch is a reset button enabling you to get out of a 'hung' connection with the minimum of fuss and return the modem to its default settings. Apart from the reset button, the only other physical control is the power switch. Every other setting is controlled by the standard AT commands.

An informative pair of manuals ensure that you quickly get up and running. There were a few hitches at first that meant editing the modem initialisation strings in our Comms software, but the manuals are actually quite helpful and they were sorted out in a couple of minutes. A few test connections to our favourite BBSs and CIX tested the Volante Fast up to 14,400 baud, while a quick call to a couple of 28,800 BBSs enabled us to test the Volante to its true speed. It worked perfectly.

The Volante Fast has been designed with the business Comms user in mind and has a professional price tag to go with it. Although it's expensive, it's also very reliable and easy to use. If you are in a situation where reliability and ease-of-use is vital, then you would do well to consider the Volante.

Sonix Volante Fast V.34

"Expensive (!), but there is no doubting the quality of this modem. Extremely easy to use."

Price: £934.13

Supplier: Sonix Communications Limited

Contact: 01285 641651

Verdict: 68%

Sportster 144

This modem was launched way back in 1993. As usual with computers, things have moved on since then and the Sportster 144 is no longer the state-of-the-art. That doesn't stop it being an extremely good modem, combining the reliability for which US Robotics are rightly famed, and an extremely low cost.

With the launch of the new Sportster 288 model, this modem has recently undergone a rather nice price-cut – it now sells for just under £140. It's an interesting example of how quickly these things move on – I remember paying a similar sum for a V.22bis modem a few years back and being very pleased that I'd got such a good price.

It's an old joke, but the closest thing to the Sportster in appearance is the Stylophone. Stylish it ain't, but it does the job. The case is made of quite thin plastic with slots on the top for the loudspeaker. These are just the sort of things that you are bound to spill coffee into, but what are you doing drinking coffee next to your computer anyway?

Seven lights on a panel at the front give you the information on how the modem is feeling and a number of dip switches allow you to change how the modem starts up. All of the other settings are controlled by standard AT commands, but this isn't the sort of modem which is going to need a lot of fiddling around with. The phrase "plug and play" springs to mind, but fortunately you don't have to own a PC to use this modem.

At the side of the Sportster 144 is a volume control, which is incredibly useful – you can adjust the volume so you can hear what is going on without it being irritating. A definite point in its favour if you are planning a lot of use. The power supply is an external lump which plugs into the rear of the modem. This means that the modem is reasonably cool during use, although it can get a bit warm during a long call.

Although it's no longer the flagship of the US Robotics range, this is still an extremely good modem and will find a lot

Sod the standards

Although there are many hundreds of different modems manufactured, most of them abide by a series of standards, so that it is possible for modems manufactured by different manufacturers to still talk to each other.

These standards are not defined by the manufacturers, but by an organisation to which most of them belong: the ITU-T (International Telecommunications Union, formerly known as the CCITT). These standards are referred to as the V standards, and each has a number. For instance, the V.22 standard allows a modem to send and receive data at 1,200 bits per second. As time moves on, these standards get faster, with the most recent addition (V.34) which can send data at a phenomenal 28,000 bits per second. However, please note that there are two versions of this standard. See the box headed "V for validation?" for more details. This is approximately 11 times faster than many older modems which use the V.22 standard.

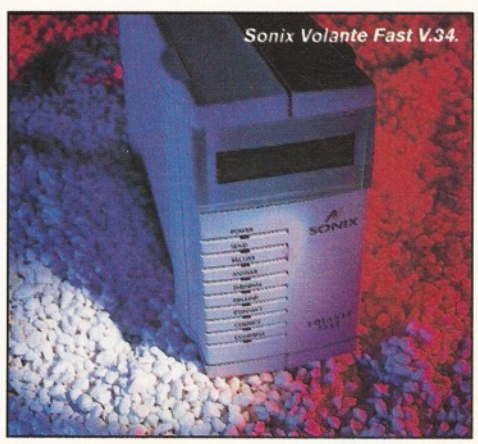
As you might expect, a faster modem can mean lower phone bills. If you can download a file quicker, you spend less time on-line and the cost of the call is less. So that you can see what sort of difference a faster modem can make, here's a few examples of how long a 130K file would take to download with the different types of modems (assuming that everything else is working alright):

Standard	Speed[1]	Time[2]	Cost[3]
V.22bis	4,800	290	34.8p
V.32	9,600	143	17.4p
V.32bis	14,400	98	11.6p
V.34	28,800	48	5.8p

1 – The speed (in bits per second) at which a modem of this standard can send or receive data.

2 – The approximate time (in seconds) to receive a 130K file.

3 – The cost of this call (at BT's normal long-distance rate of 50 seconds per 5.8p).


Sonix Volante Fast V.34.

V for validation?

The most recent modem standard is V.34, which was finally approved in June 1994. However, modem manufacturers are an impatient bunch and many of them couldn't wait for this new standard to be approved. So, they got together and worked out a slightly simplified version of this standard, which they gave the catchy name of V-Fast.

Since then, many V-Fast modems have been appearing on the scene, some of which promise upgrades to V.34. In practical terms, the differences are pretty minimal.

Although the V.34 standard has now been finalised, many manufacturers are still shipping V-Fast models. In the beginning, the manufacturers hoped that the upgrade to V.34 could be done by merely changing the software built into the modem, but it actually turned out to be a bit more complex than that. One particular chipset (the set of chips which form the heart of the modem), which was manufactured by Rockwell, has to be completely changed to upgrade to V.34. This chipset is used in a wide range of modems, including the Supra models.

The moral of this story? Check the exact specification of the modem you are thinking of buying and what upgrades are possible...



Interdial M5134.



US Robotics Sportster 288.

of use. However, I would seriously recommend that you consider investing another £100 or so in the V.34 model (reviewed below), as this could save you a lot in the long run in phone charges.

Sportster 144

"A classic modem, now at an immensely affordable price. Recommended, although you should think seriously about spending extra on the V.34 model."

Price: £138.99
Supplier: First Computer Centre
Contact: 0113 231 9444

Verdict: 90% Star buy

Sportster 288

The most recent addition to the US Robotics range, this modem was launched late last year. It was one of the first to use the real V.34 standard as opposed to the V-Fast standard, which was designed as a stop gap while the V.34 one was still being finalised. For details of the difference between the two standards, see the box headed "V-Fast versus V.34".

Physically, the modem is almost exactly the same as the 14400 model, with two minor changes. The first is that the label on the front is green (instead of red) and the other is that the holes for the loudspeaker have moved. Instead of one single hole, there are now three smaller ones.

I would presume that this is something to do with the ventilation, as this modem does seem to run slightly hotter than its older cousin. This is certainly not a problem, though, and it's still a hell of a lot cooler than the Supra modems.

In use, the modem performs very well indeed. I was able to achieve V.34 connections to nearly all of the BBSs we used to test the modems in this Supertest. However, it *did* move down to a slower speed on one in the United States, where the quality of the phone line left something to be desired. The Sportster is certainly not alone in this, as most of the modems exhibited similar behaviour in the same circumstances.

In all of the other tests we carried out it performed extremely well, with good connections and no loss of the carrier. Overall, this is an extremely impressive modem.

If you are a home user, this is the one I would recommend...

Sportster 288

"A very good upgrade of a truly classic modem. It will definitely carry on the excellent reputation of the Sportster range."

Price: £234.99
Supplier: First Computer Centre
Contact: 0113 231 9444

Verdict: 92% Star buy

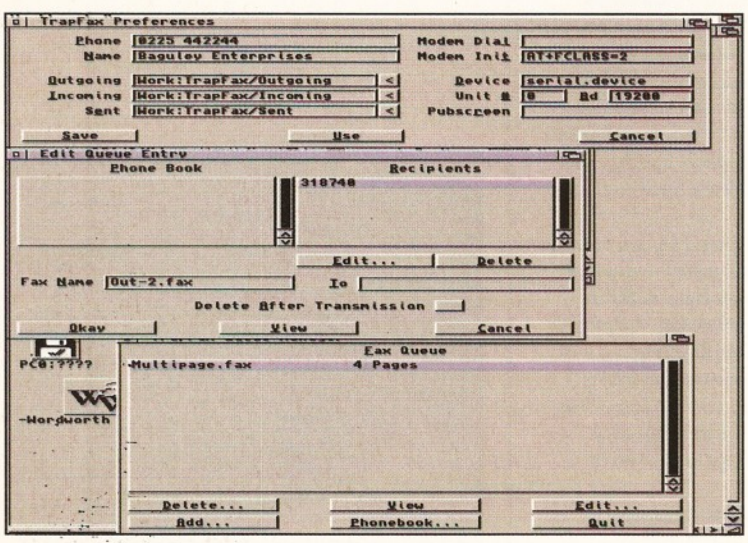
SpeedCom+ 28800

Er, well, the only thing that I can think of in connection with the Speedcom is a rather unpleasant 70's clock radio my mother used to own. Yuk! The case is plastic and about the size of a small paperback book. Frankly, I'm not overly impressed with the design, but it's the sort of thing you could live with if the product was particularly cheap.

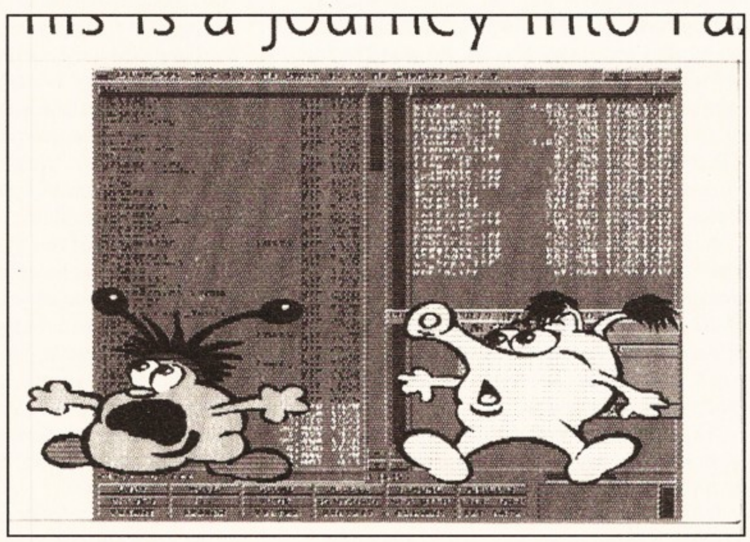
In use, it seems pretty reliable. It coped well with transatlantic calls and dodgy lines, with no more of a tendency to drop the speed than any of the other modems. The only real gripe that I had was the fact that the loudspeaker for monitoring calls was very quiet and could barely be heard. With Morrisey Live blasting away in the background, it couldn't be heard unless you picked up the modem and put it close to your ear, which is hardly the best way to deal with these things.

I did wonder if this was a fault with the review unit, but the 14400 model (reviewed on page 35) also exhibited the same symptoms. Nine LEDs at the front of the modem give you the status, and this is usually enough to work out what is going on, although it was sometimes difficult to work out how the connection process was proceeding when you couldn't hear it.

▶ 35



GPFax can be a printer driver, so you can fax documents from nearly any program.



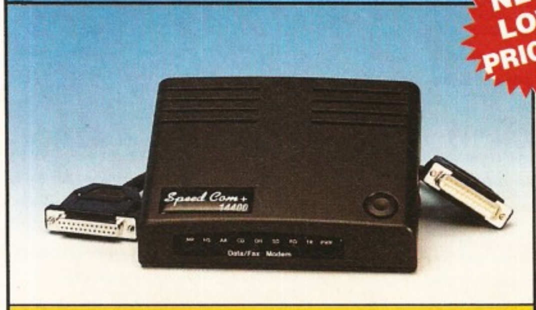
The quality of images faxed through GPFax leaves something to be desired...

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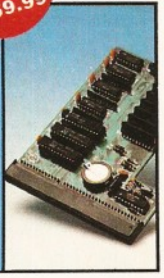


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G387 **MONOPOLY** Computer board game. Good conversion.
G331 **SUPER LEAGUE MANAGER** Football game.
G344 **SHEPHERD** Brilliant game along the same lines as Populas - the God game. Not WB 1.3.
G324 **TASK FORCE** Stragegy wargame. Reviewed last issue.
G269-G270 (2 DISKS) **18th HOLE GOLF** Arcade Golf game.
G255 **AMOS CRICKET** Cricket game.
G273-G274 (2 DISKS) **STARBASE 13** Monkey Island style point and click graphic adventure game. Set in the future upon a space station.
G342 **SCRABBLE** Good version of the board game.
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D253-D254 (2 DISKS) **LURKING SHADOWS** WB 3.0+ only.
D255-D257 (3 DISKS) **WHAMMER SLAMMER - by REBELS** Hard drive installation only WB 3.0+ only.
D258-D259 (2 DISKS) **MOTION ORIGIN 2** Gorgeous looking production. WB 3.0+ only.
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D269 **ZEROS + ONES** WB 3.0+ only.
D270-D271 (2 DISKS) **DOVE** Entrant from the Trade Party 94. WB 3.0+ only.
D272-D273 (2 DISKS) **OXYGEN INDIGO** WB 3.0+ only.
D274-D275 (2 DISKS) **SOUL KITCHEN - by SILENTS.** A fine demo by Silents.Doesn't work with fast ram intstalled. WB 3.0+ only.
D276-D279 (4 DISKS) **VISION IN BLUR - POLKA BROTHERS** Fantastic non AGA demo, for all Amiga's.

MOST OF THE ABOVE DEMOS ARE FROM THE TRADE PARTY 4, HELD RECENTLY.

D232 **BAD ZOOM** Rubbish visuals but funky music track. I like it!
D233 **TRACKERS 242** Great follow up. If you only have 2 meg, disable all external drives (inc. HD's). WB 3.0+ only.
D234 **VITAL** From up and coming codings, Mystic.WB 3.0+ only.
D235-D237 (3 DISKS) **MAXIMUM OVERDRIVE II** WB 3.0+ only.
D239 **BALLABORNTRO** rave demo. WB 3.0+ only.
D240-D241 (2 DISKS) **ARTIFICE** WB 3.0+ only.
D242-D243 (2 DISKS) **INFECT** WB 3.0+ only.
M156 **SWAMP THING** Mix of the chart single. WB 3.0+ only.
D217 **POLKA BROTHERS "GEVALIA"**
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D223-D224 (2 DISKS) **SWITCHBACK** From Rebels. Some amazing routines, especially the roller coaster. WB 3.0+ only.
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M160 **MUSIC MAYHEM** - Funk, rave, ragga and others.
M157-M158 (2 DISKS) **STAR TREK THEMES** Theme music to the Star Trek and The Next Generation. For trekie fans.
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U454 **PROFESSIONAL FILE SYSTEM V9.5** Increase read/write performance of floppies and hard drives with this new DOS filing system, better than Commodore's own filing systems. Not WB 1.3.
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U456 **PAGESTREAM D PATCH** Upgrade your bug ridden version with this official software release.
U512 **AF COPY v4** D.Opus style file manager. Not WB 1.3.
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U522 **VIDEOTRACKER 2 OCS** Videotracker for non AGA amiga's. Not WB 1.3.
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U158 **NO ERRORS** Formats disks hiding, any fatal hard errors. Useful for hard drives with faulty tracks.
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U314 **OCTAMED TUTOR** Tutorial guide to using Octamed v2.00.
U304 **TEXT ENGINE v4.1** Powerful shareware word processor.
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T71 **DEADLOCK 9** The SCENE disk magazine. Kewl.
T72 **UPSTREAM 9** Another top Scene magazine with loads of up to date news and more.
T74-T75 (2 DISKS) **GRAPEVINE 20** Needs no introduction. The latest issue of the most sort after Amiga disk mag around.
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E95 **KIDS DISK 5** - Educational games for kids by D.Moran.
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E71 **CHILDRENS FAVOURITES 1** - Nursery rhymes.
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E100-E101(2 DISKS) **WEATHER GUIDE** - Multimedia. Not WB 1.3.
E102 **A TO Z PAINT PAD** Colouring-in book with pictures and the alphabet. Well done. Not WB 1.3.

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IMAGINE

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IMAGINE BUDDY SYSTEM

Used in conjunction with Imagine 2.0 for the ulitmate Imagine tutorial and reference guide. Every single function is detailed in great depth. Essential.
DISK REFERENCE: U476-U477 (2 DISKS)

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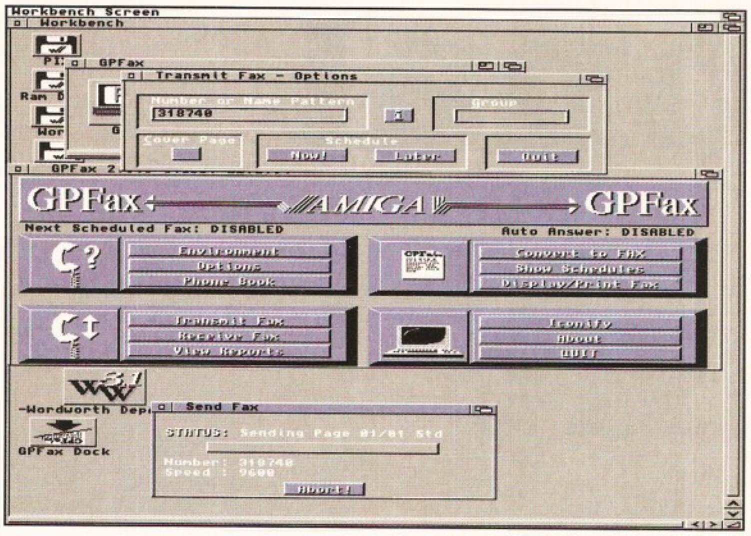
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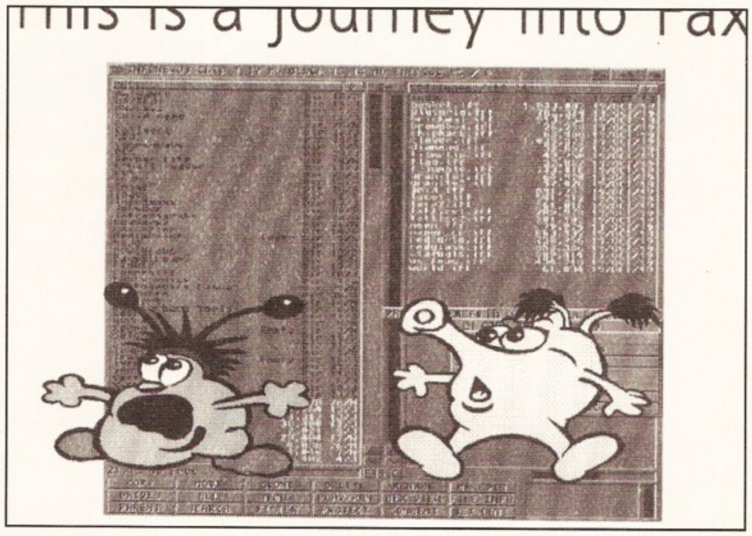
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The TrapFax interface is fully up to the Workbench 2 standard and is very easy to use. You can send a fax to several recipients by simply clicking on them.



TrapFax is much better at processing images for faxing, although the quality is still nowhere near as good as with a decent printer.

32 ▶ It's pretty obvious that quite a few corners have been cut in this modem to keep the cost down. It works, and works fairly well, but I'm not overly happy with the design of the case and the speaker. The former one of these is, to some degree, a question of personal taste, but the speaker problem has cost this a good few per cent. It's a cheap modem and it shows.

SpeedCom+ 28800

"Some fairly obvious cost-cutting exercises have kept the cost down, but it still performs well enough."

Price:	£199.99
Supplier:	Siren Software
Contact:	0161 724 7576

Verdict: 70%

SpeedCom+ 14400

This modem is more or less exactly the same as the Speed Com+ 28800, except that it is only capable of making V.32bis connections (i.e. 14,400 bits per second). Apart from this, the design and performance of the modem is pretty much identical, with the same good tolerance of dodgy phone lines and transatlantic calls.

It's a lot cheaper, but, once again, you should think carefully before buying this, as you will probably save a lot on phone bills by investing in a faster modem.

SpeedCom+ 14400

"A competent modem at a good price. The design leaves something to be desired."

Price:	£199.99
Supplier:	Siren Software
Contact:	(0500 340548)

Verdict: 70%

FAX programs

All of the modems included in this Supertest are capable of sending faxes. This isn't really that surprising; a fax machine is basically a scanner with a modem attached. As you already have a computer (which is easily capable of generating a document in a form suitable for faxing), all you need is the modem and some software.

There are several PD fax programs available, but if you want a program which will allow you to fax properly and easily, you will need a commercial program. There are two contenders – GPFax and TrapFax.

GPFax

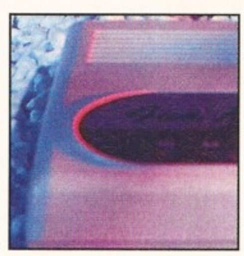
This was the first commercial fax program for the Amiga. It's written by the prominent Australian Amiga programmer, Greg Perry. Versions of the program for modems, which support both Class 1 and Class 2 modems, are supported on the same disk, so this program should work with more or less any fax modem on the market. A special version for the Supra V.32bis fax modem used to be available, but this has also now been incorporated into the main program.

It's very easy to install and works in a similar way to most fax programs by setting itself up as a printer driver. So, when you want to send a fax, you kick off your word processor or DTP program, create your fax and then print the document. The various resolutions available for faxes are available as print densities.

GPFax then captures the file as it is printed and jumps to the front. You can then enter the number to fax to, or pick one from the directory. As you would expect, you can enter your own numbers and can even set it to fax a group of numbers at a later time. This would be extremely useful if you want to send a long fax in off-peak hours, or want to send a fax in the depths of the night.

If you want to use a text processor, such as CED or GoldEd, you can insert formatting commands in a normal ASCII text file. GPFax will interpret these commands when you fax the document. For instance, \B turns bold text on and \b turns it off again. The results for this can be somewhat

> "A fax machine is **basically** a scanner with a modem attached."



Interdial M5134.



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The large picture shows, among other things, practical applications of Palette Merge and Color Average Resize (used to scale and combine all items), Color Quantization (applied to 24-bit images), Gradient Fill and Alpha Channel (used to create the shadow) and various other image processing effects.



From the International Press

Animation is fast and effective, particularly because of the innovative storyboard feature.

Virtual memory is fantastic if you don't have enough real memory in your machine.

The image processing tools are bountiful and versatile as always, and the 24 bit printing is again excellent. It certainly pushes printers to their limits, and the results may very well surprise you.

PPaint is unbeatable at handling the palette and in remapping quality.

Font handling on PPaint has always been fantastic. I like the way that you can type directly over the screen and still use the cursor and delete keys for editing, even if you've typed a whole screen full of text.

The alpha channel is simple to use and yet a very powerful feature normally found on expensive 24 bit programs.

Rating: 90%

Gary Fenton, Amiga User International, Great Britain

What do BBS users, C programmers, Bridgeboard users and Amiga artists have in common? Give them all a copy of Personal Paint and you'll find out.

Fred Hurteau, Amiga World, USA

hat installer happens to be one of the friendliest d most intelligent I've had the pleasure to e... PostScript output is finally supported by a int program!...

*'s see *** do that!*

ing: 92%

dley Storey III, Amiga Down Under, Australia/NZ

xcellent piece of software: stable, user ly, fast. It is packed with unique features that make it very precious in many difficult situations: color quantization, palette merge, image processing, PostScript color separation, professional Preferences printing and many more.

Highly recommended, both to novice users, who will take advantage of the excellent documentation and the intuitive user interface, and to experienced professionals of different fields such as graphics, DTP, programming and multimedia.

Editorial, Amiga Magazine, Italy

As a professor of plastic arts and counselor at the film institute, I'm always in search of tools which succeed in combining ease of use with a range of original features. My most recent discovery has been Personal Paint.

This time, I don't need a dictionary to read the manual. It is direct, clear and concise. It is detailed, yet simple and perfectly accessible to the beginner.

Christian Hamoneau, AmigaNews, France

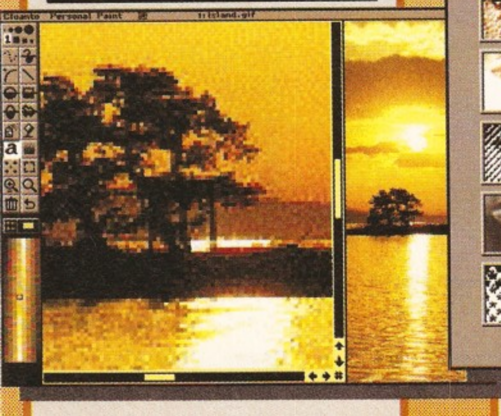
... If you cannot believe all this to be true, read our review.

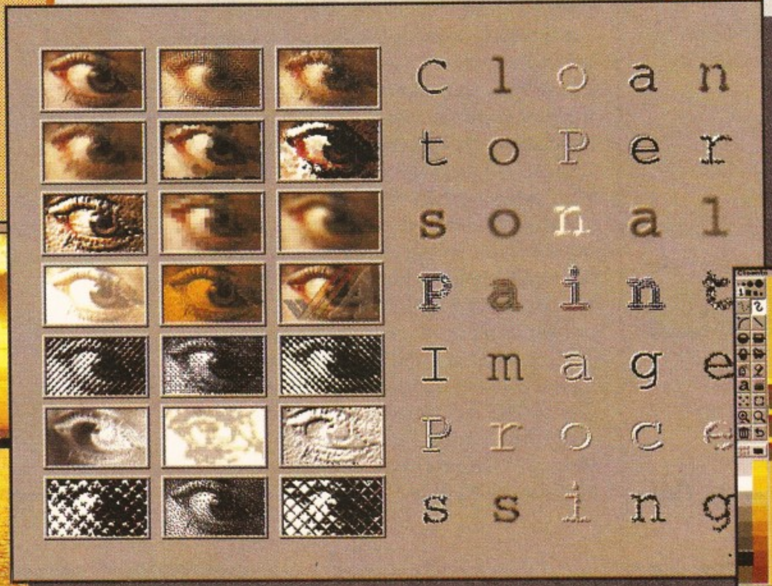
Rating: Editor's Choice

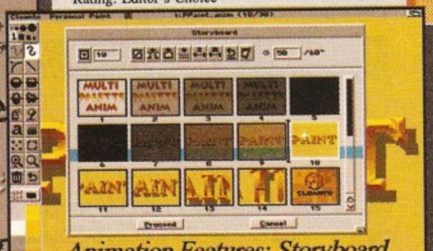
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Animation Features: Storyboard, Superior Compression, Multiple Palettes, Frame-by-Frame Timing...

Final words of wisdom

A wise woman (Judith Sterne) once said: "Experience – a comb life gives you after you lose your hair". Buying a modem is rather like that – you never know quite what you are going to get until you've already forked out the cash.

Hopefully, I've begun to give you a parting with this Supertest, but there are several things that you can do to ensure that you aren't suffering from computing dandruff.

The easiest and most obvious thing is to work out how much you can afford. It makes sense to buy the best and fastest modem that you can afford, as you will eventually save what you spend in phone bills.

Buying a cheap V.22bis modem may save you cash to begin with, but your phone bills will be larger once you start getting into some serious modem use.

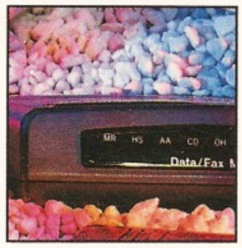
Secondly, you should think about what you are planning to use the modem for. If you are planning only light domestic use, then you would be best off with one of the cheaper modems, such as the Frontier XL or the Sportster 288. If you are planning some serious use, or are looking at a modem for use on a BBS, then you should get hold of a more heavy-duty model, such as the US Robotics Courier, or the Supra.

Of the modems we reviewed, the ones which really stood out from the crowd were the Sportster 288, the Courier V.34 and the Frontier XL. All of these performed extremely well and any of them would be a great choice for the Amiga Comms enthusiast.

Which one you choose depends very much on exactly what you are looking for and how you plan to use it, but one of these three should serve your needs admirably. There is certainly no shortage of modems to choose from. We've only scratched the surface with this Supertest as there are many hundreds of different models available.

Despite this, picking a modem is easier than picking other peripherals. With modems, the various standards ensure that it is relatively easy to work out what different models are capable of doing, so you can be pretty sure that you know what you are buying. So, what are you waiting for?

There's a whole new world out there just waiting for your call...



SpeedCom+ 28800.

35 ▶ unpredictable, so I recommend the use of a word processor.

As this program works as a printer driver, you are not limited to sending text. In fact, you can send any document which can be printed, so you can easily incorporate graphics, multiple fonts and the like. You should remember that fax machines are not really designed to be used for transmitting images, so the results can look rather poor. Greyscale images can be sent, but it's usually best to stick to line art where possible.

Receiving faxes is also possible. This is achieved through leaving a program running all the time which keeps an eye on the fax modem and receives the fax. This received fax is then saved out as a (big) IFF file, so you can load into a program such as DPaint or Personal Paint and read it or print it from there.

GPFax is easy to use, but I found the interface a little clumsy. There are no pull-down menus and the whole thing reminds me of programs designed to work with Workbench 1.3. In these days of Workbench 3.1, I don't really find this acceptable.

GPFax

"It works very well, although the interface is non standard and slightly clumsy."

Price: £49.99

Supplier: First Computer Centre

Contact: 0113 231 9444

Verdict: 75%

TrapFax

TrapFax is written by TrapDoor Developments, the people behind the excellent TrapDoor shareware E-mail software. The first thing you should note is that it will only work with Class 2 fax modems. Although all of the modems in this Supertest are Class 2 compatible, many older modems are Class 1 only, so they will not work with TrapFax. For instance, the US Robotics modems in this Supertest are Class 1 only, so they won't work with this software.

TrapFax works in a similar way to GPFax in that it installs a pseudo-printer driver, so you can send faxes from any program which supports Workbench printer drivers. The installation process is pretty simple and does not require much fiddling. If you want to receive faxes, the installation routine drops a program into your WBStartup folder which deals with this. This does not take much memory, although receiving a fax will slow things down as it involves quite a lot of shuffling data around. You can either view the received fax from within one of the TrapFax programs or save them out as IFF files for use in another program.

Sending a fax is a simple process. Check that the right printer driver is selected, print the document, select the number to fax it to and you're off. A small window shows you what is going on, so you can check that the fax is being sent correctly. We tested this program with several of the modems in this Supertest, and it performed very well with all of them.

As you would expect, TrapFax allows you to set up a directory of frequently used numbers, and you can send a fax to several recipients by simply clicking on them in this directory. Faxes can be queued up for sending later and the program will automatically re-try a few minutes later if the remote fax machine is busy, or the fax fails to be received properly.

TrapFax

"An excellent program which is very easy to use, as long as your modem supports the Class 2 commands." ■

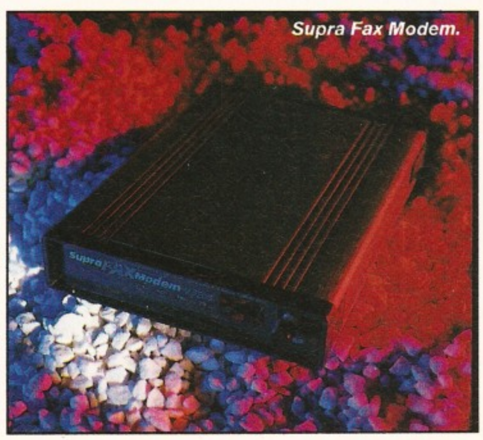
Price: £54.95 incl. p&p

Supplier: Blittersoft

Contact: 01908 220196

Verdict: 80%

> "it makes sense to buy the **best** and fastest modem that you can afford, as you will eventually save what you spend in phone bills."



Supra Fax Modem.

Squirrel

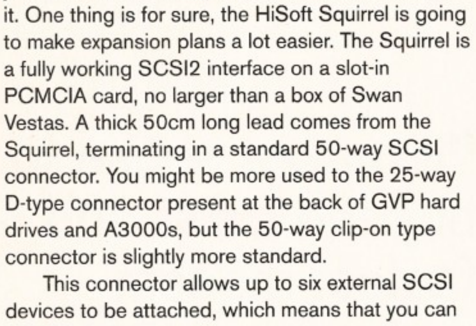
Do you want to make the most of your A1200's limited expansion capabilities, but can't quite afford to splash out on the Ramiga Z5 system reviewed last month? Buy a Squirrel! **John Kennedy** *explains.*

The A1200 has three useful interfaces: an internal IDE connector, a trapdoor port and the PCMCIA card slot. It might seem like a lot, but it's getting increasingly easy to fill them all up and then discover you have effectively blocked any future expansion plans.

This is especially true of the PCMCIA slot: as a Highlander fan might say: "There is only one" and you better know exactly what you want to stick into it. One thing is for sure, the HiSoft Squirrel is going to make expansion plans a lot easier. The Squirrel is a fully working SCSI2 interface on a slot-in PCMCIA card, no larger than a box of Swan Vestas. A thick 50cm long lead comes from the Squirrel, terminating in a standard 50-way SCSI connector. You might be more used to the 25-way D-type connector present at the back of GVP hard drives and A3000s, but the 50-way clip-on type connector is slightly more standard.

This connector allows up to six external SCSI devices to be attached, which means that you can add CD-ROM drives (yes, more than one if you like), hard drives and tape streamers – and have them all connected and operating at once. For example, the Squirrel lead is connected to the CD-ROM drive, a hard drive is connected to the CD-ROM drive and a SyQuest removable optical drive is connected to the hard drive. Suddenly the one PCMCIA slot isn't a problem anymore.

As the A600 also has a PCMCIA slot, this machine too can finally have a CD-ROM drive or SCSI hard drive attached. However, remember that the lack of an AGA chipset on the A600 means it will be impossible to play any CD^{32}-specific games.



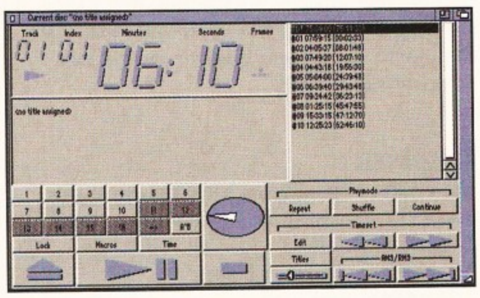
The CDPreference window keeps track of any CD-ROM drives attached and makes sure they behave as much like a CD^{32} as possible.



Installation nightmare?

Unfortunately, when it came down to installing the Squirrel on my A1200, things didn't go too well. In fact, it was a nightmare, but I have to point out that this was *entirely my own fault.* First of all, the A1200 was running a weird hybrid of Workbench 3.0 and Workbench 3.1 on its internal IDE hard drive after a few previous experiments.

Secondly, the PCMCIA pins in my much-maligned test A1200 had become slightly bent – heck, one even broke off as I tried to straighten them out (don't try this at home kids). As for reading the rather detailed and well-written instruction manual... hah, I'm an expert!



The rather excellent Jukebox program, which will allow you to play Audio CDs on a CD-ROM player from Workbench (or using ARexx).

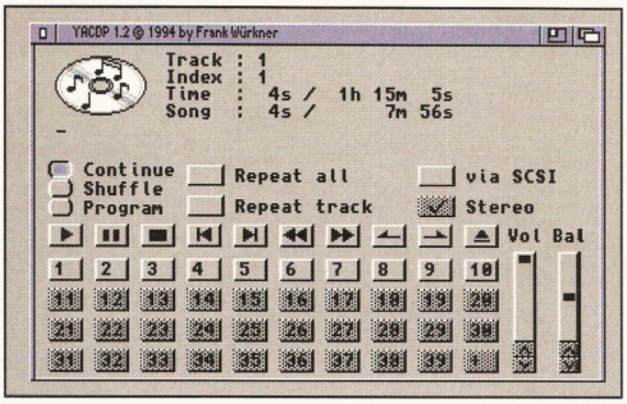
Things were looking grim until I reinstalled the standard Workbench 3.0 disk and gently eased the Squirrel home, whilst whispering encouraging comments to it. I even read the manual.

What this all means is that as long as you are not an 'expert' like me, you'll get the entire installation process done in four minutes flat.

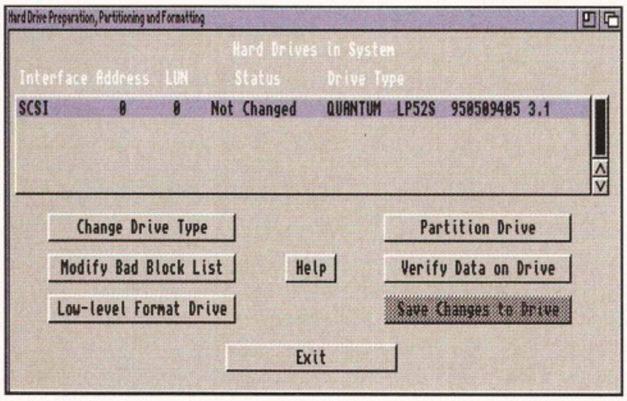
I installed the HiSoft software, connected a nearby SCSI CD-ROM drive, rebooted and guess what? The Super Stardust CD in the drive booted automatically and I temporarily had a CD^{32} to play games on. Cool! Oops, I forgot – no games in Amiga Shopper.

Er, what I meant to say was that inserting a serious CD-ROM (the latest Aminet as a matter of fact – more than enough reason to get a CD-ROM drive in itself) meant that I had an extra disk icon on the Workbench, with the best part of a Gb of Public Domain software at my beck and call. The Squirrel's CDFilesystem (well, Commodore's actually) automatically deals with any CD-ROM as any other disk; except, of course, they are very big (600Mb) and you can't save anything to them.

I also tested the Squirrel with a SCSI hard drive. The supplied software (a version of the HDToolBox that IDE drive users know and love)



The extremely surprising YACPD program will not only play CDs as Jukebox, but will actually sample the audio data directly from the disk. You can play it back live through the Amiga's audio outs, or save samples to disk as IFFs. Impressive, but not compatible with all CD-ROM drives.



If you are adding a SCSI hard drive to the system, good old HDToolbox comes to the rescue. It will 'prep' the drives for you and allow partitions to be set. It's all explained in the HiSoft manual, thank goodness!

partitioned the drive easily and I then formatted it from AmigaDOS. Once more, I had an extra disk icon on the Workbench – this time 50Mb of hard drive to play with.

Smooth running

In total, I tested the Squirrel with three different SCSI devices – two CD-ROM drives and a hard drive. The first CD-ROM was one supplied by HiSoft and was a triple-speed Toshiba mechanism. It provided data at over 500,000 bytes a second according to SysInfo; very respectable indeed. The second drive was a dual-speed Panasonic, very kindly lent by First Computer Centre. Again, it worked faultlessly.

The Quantum hard drive was a bit of a surprise, and, although rather elderly, worked extremely quickly, even faster than the internal IDE hard drive. I copied Workbench to it, and could reboot from the SCSI mechanism without any problems.

Speed trials

A1200/2Mb chip

- Triple Speed CD-ROM: 445,000 bytes/sec
- Double Speed CD-ROM: 315,000 bytes/sec
- Quantum hard drive: 915,000 bytes/sec

A1200/2Mb chip/4Mb Fast

- Triple Speed CD-ROM: 526,000 bytes/sec
- Double Speed CD-ROM: 310,000 bytes/sec
- Quantum hard drive: 915,000 bytes/sec (850,000 bytes/sec on A4000/040)

Figures using SysInfo. Expect faster speeds with a dedicated SCSI2 hard drive, or if a 68030 accelerator if fitted.

Generally, the SCSI hard drive worked faster than the 3.5 inch internal IDE drive and much faster than a 2.5 inch mechanism. An A600 will not be able to match these speeds.

Some Public Domain utility software came on disk, including a spare CDFilesystem for the board and some excellent Audio CD support programs. Now I could play Orbital from the Workbench and, even better, the Toshiba drive could sample the audio over the SCSI cable and replay out through the Amiga's own audio ports – or even save it as an IFF sample. Lots of scope for experiments there.

Damn it, Amiga Shopper or not, games *are* important, especially as the Squirrel claims to provide CD^{32} compatibility. It aims to do this by providing special scripts which can switch off extra memory, or processors (not all CD^{32} games will fail with these extras present; some well-written ones will work better with them) and a few libraries to add CD^{32} specific features.

It's a technique that works well – certainly with the games I tested. You can expect James Pond, Brutal Football, Liberation and Pinball Fantasies to work perfectly.

If you can't get a CD^{32} game to load and run automatically, something which will happen in the vast majority of cases, you can tinker with the start-up settings. If you are not technically minded, you can be sure that others will get the necessary settings worked out and will make them available. The only real problems I had were with getting some old CDTV titles to work – but that is hardly a cause for crying yourself to sleep.

Compared to a dedicated CD^{32} emulator, and excluding Commodore's for the simple reason that you can't get one, there are several advantages. For starters, you aren't stuck with a CD-ROM drive – you could get a hard drive and only then add a CD-ROM if you really wanted. SCSI hard drives are a lot cheaper than internal 2.5 inch IDE drives and, as they are fitted externally, you won't have to worry about opening your A1200/A600's case up.

The only downsides are the level of CD^{32} compatibility (time will tell which system is best; I'd estimate they are pretty much on a par) and the lack of a method of mixing the Amiga's audio output and CD player audio.

The SCSI story

The Small Computer Systems Interface has been with us a long time now (it dates from the late Sixties, which means it's as old as I am – phew), but has still refused to be superceeded. It's a platform independent standard, which means that as long as you can get an SCSI interface for your computer, you can use any SCSI peripheral, assuming you have the correct software driver that is.

In practice, the Amiga is well served and it is possible to use CD-ROM drives, hard drives and magneto-optical drives without any problems. Each SCSI device has its own unique SCSI 'ID' code, set by jumpers or switches on the peripheral itself. Up to seven devices are supported on any SCSI chain, but the interface itself is considered to be a device, which means that six distinct boxes can be connected. However, if you are using a multiple disc CD-ROM player, there is provision to address each disc individually using 'LUN' numbers.

The Squirrel is a SCSI2 device. it understands the enhanced SCSI2 command set whilst maintaining downward compatibility with any older SCSI equipment, such as older hard drives. When connected to dedicated SCSI2 peripherals, data transfer is faster. Incidentally, you can pick up smaller capacity second-hand SCSI drives for peanuts these days – but try before you buy in case of many 'bad blocks' (failures) on the disk.

One potential program for SCSI users is Termination. A series of SCSI peripherals and cabling can start to act rather like a large, long tank full of water. Signals are transmitted from one end to the other as ripples, but if the ends of the tank are not treated carefully, reflections can be set up which cause the signals to become corrupt. Dealing with Termination is usually only a matter of setting a jumper on a CD-ROM drive, or possibly fitting a small resistor pack to a hard drive, but it can lead to unpredictable results if you forget about it.

Flexible system

If you want to build up a flexible system, you should consider putting the Squirrel at the heart of your A1200's expansion plans. Not only can you add the CD-ROM drive which suits your requirements (you choose the speed, make and price), but hard drives and other media as well. The only snag is tracking down suitable boxes and power supplies to house them all in. But HiSoft will quite happily discuss suggestions with you and sell you some solutions if you require. HiSoft are also selling a wide range of suitable SCSI equipment at excellent prices.

During the tests, the Squirrel worked extremely well – at times better, more reliably and even faster than the SCSI2 interface in my A4000. The CD^{32} emulation is a sterling piece of work and, to be perfectly honest, after the Ramiga Z5 system (reviewed in issue 47 – see page 106 for back issues) this is one of the most important A1200 peripherals yet made. You'd be nuts to miss it! ■

Squirrel

Price: £69.99
Supplier: HiSoft
Contact: 01525 718181

Verdict: 95% Star buy

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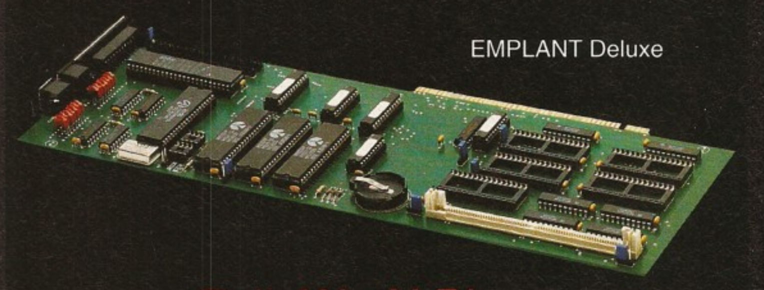
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Pegger 2

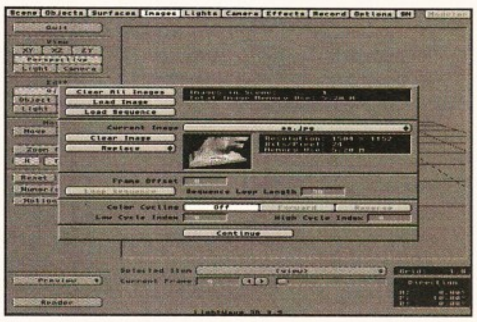
Seamless support for compressed images is now within your grasp and **Nick Veitch's** *too.*

The Joint Photographic Experts Group standard for compressed images, JPEG, has really taken off since its inception at the beginning of the decade. This file format allows phenomenal compression ratios of at least 4:1, and if you are prepared for lossy compression, that is to say compression where the stored image is not completely faithful to the original, you can even reap the benefits of a ratio around 20:1 without a noticeable lack of quality.

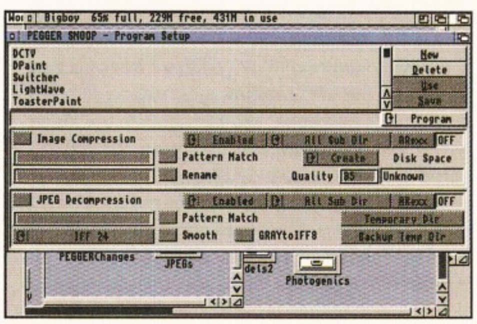
The importance of JPEG becomes apparent when the average size of images (a 24-bit overscan image is typically over 1Mb) has outgrown the average size of the storage media (a standard Amiga floppy stores only a little over 800K).

Pegger is a runtime compression and decompression utility. It acts as a buffer between your chosen application and image files on disk, allowing you to use JPEG files even if your main application doesn't support them.

Once you have installed Pegger (made easy by the standard Commodore Installer utility) and run it, all the Pegger utilities can be accessed by the Workbench "Tools" menu. It is necessary to have Workbench 2 to run this software and you will also need at least 2Mb of RAM.



Now you can import JPEGs directly into software such as LightWave.



With Pegger 2 you can snoop on applications, rather than just a single directory.

Improvements

Pegger 2 has made some significant advances on the original version. As well as the increased file format support and the application specific snoop (as opposed to simply monitoring a specific directory), this latest version has added Network support.

It certainly works on Parnet, which is very useful for those of you who are using an old CDTV as an intelligent CD-ROM drive. It seems to work on Envoy, and it is claimed it will also work on OXXI's Novell compliant network software, although we were unable to test this.

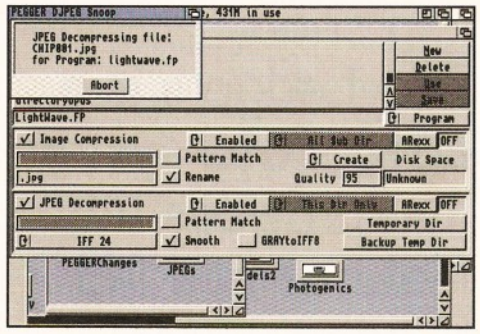
Having selected the Snoop utility from the menu, you can specify which applications should invoke the Pegger routines. The main failing of the Snoop software is its complexity. It does have a wide range of features and options, but it could be difficult to configure them to your requirements without much consultation with the manual.

If you prefer working by the old Pegger method, where the Snoop program continually monitored a specific directory and compressed, or decompressed, anything that was written into it, you can also select this from the main Snoop window.

As well as supporting decompression to 24-bit IFFs, Pegger 2 can also support RGB8 files (as used by Imagine and TurboSilver), 256-colour IFFs, Targa (as used extensively on the IBM PC and also supported by LightWave and Real 3D) and also Greyscale JPEGs, a specific type of JPEG image which is more economical to use when storing 256-grey images.

Obviously some programs, such as Brilliance, will not be able to deal with 24-bit IFFs, but you can select a destination format for Pegger's decompression utilities, such as HAM8 or 256-colour mode. Unfortunately, this does not stretch down to non-AGA screenmodes (HAM would have been nice).

In use, a small window will open in front of your application, telling you that Pegger is working. Obviously, Pegger's speed is very much dependent on the size of the image and the speed of your Amiga, but, even so, Pegger is not quite as fast as having software that directly supports the JPEG format.



A window will pop up to tell you when Pegger is processing a file – handy, as it can take a while.

The DJPEG and CJPEG utilities can also be used for batch file compression. They work very well even in a basic "compress everything in this directory" format, and can easily outperform ADPro, even when using a custom ARexx script. The Compression routine, in particular, has been improved and is now almost twice as fast as the original Pegger. Pegger also has full ARexx support, so if you really want to dabble in some arcane coding, the software won't grumble.

Pegger is a particularly useful utility if you are dealing with advanced DTP or 3D rendering, or, in fact, any other task which deals with traditionally large, 24-bit images. It copes with these tasks easily. When it comes to the crunch, though, it is simply a matter of convenience – if you are doing these tasks, you probably use ADPro, Image FX or Photogenics already, which can all translate JPEGs into any other form you could want – but, if time and effort are important to you, Pegger may be just what you need.

The software *could* be easier to set up, it *could* support HAM images, it *could* probably be even faster, but it does what it set out to do cleanly and efficiently. If you just can't be bothered to write a script for ADPro, or your time is worth far too much to waste it converting images, let Pegger have a go. ■

Pegger 2

Price: £34.95

Supplier: Ramiga

Contact: 01690 770304

Verdict: 75%

Easy Ledgers

The idea behind EasyLedgers is to provide everything you will need to run a small business in one package. **Graeme Sandiford** *finds out whether this accounts package is worth its weight in gold, or not.*

“ In short, EasyLedgers is a **complete** system that provides the features needed to keep up the accounts of a small business.”

There are three main types of software in this world. Exciting software that you want and functional software that you need in order to perform a certain task. The third type are the programs that you need, but are only on the PC and Mac. The prime example of such software is commercial-quality accounting packages.

The Amiga has been starved of them for years now and while it may not be as exciting as an image processor, or a ray-tracer, a new accounting package certainly deserves a look. EasyLedgers 2 (I don't quite recall ever seeing the first version, though) is just such a package and a promising one at that, which has been published by Australian developer Small Biz Software.

One thing that surprised me about this package was that it came with a dongle. You might expect this of a graphics program that could cost anywhere between £200 and £500 – but, EasyLedgers 2 costs £200, so maybe it shouldn't be so surprising. Right, I'll give you a few moments to recover from that £200-shocker. Yes, 200 smackers *does* seem like quite a lot of money, but do bear in mind that you could end up paying at least double that for a PC package.

But is EasyLedgers really worth £200? That will pretty much be the only judging criterion, as the program has no competitors. Initially, while holding the single diskette that it comes on, I thought no – I mean, £200 for one disk? One good thing about the program's size is that it's easily and quickly installed. You'll need a hard drive, 2Mb of memory and Workbench 2, or above, to use the program.

The business

The idea behind EasyLedgers is to provide everything you will need to run a small business in one package. Because of this, integration of the modules plays an important part in determining how effectively the program can be used. The program takes a logical approach to this – as you enter your account, you can choose to enter any section of a particular account. There are five of these – the Purchase, Sales, Ledger, Inventory and Jobs sections.

Once you have entered one of these sections of an account, you can quit out of it and then enter another section without having to leave the program. While this is a workable system, it would have been handy to be able to open several of the sections at once. This would, for example, enable you to compare suppliers' details with those of your buyers. Perhaps a window-based system, where you could cycle through sections and re-size their windows, would have been better.

Aside from that, the program has quite a nice interface with lots of large, colourful icons and a logical structure. The structuring of the program lends itself to a hierarchical way of working that can help inexperienced book-keepers get to grips with how to computerise their accounting system.

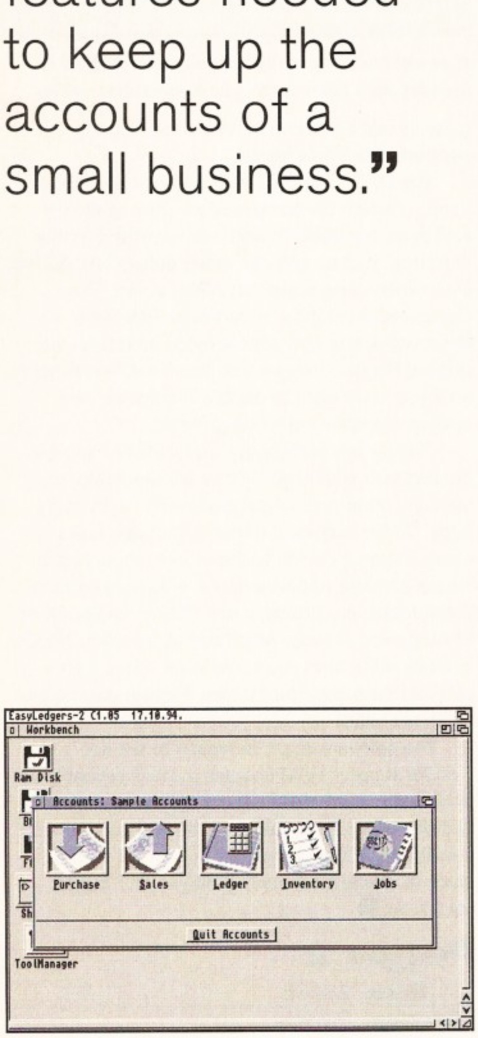
The manual was a pleasant surprise – I had been staring at it for at least an hour while in a state of dread. The reason was that I was experiencing flashbacks to my A-level accounting lessons, which was an entirely unpleasant business and one that left me with a fear of accounting-related books. But, after plucking up the courage to open it, I found that it was surprisingly easy to follow – how I wish I had that manual all those years ago! It's as easy to follow as it could be and, what's more, it does an excellent job of explaining the book-keeping principles behind the software. You could learn to use the software, with no prior knowledge of accounting, within a day. It gives you an overview of the program's capabilities and takes you through step-by-step exercises.

Famous five

As mentioned before, the program is divided into five parts: the Purchase Book – for keeping track of payments to your suppliers; the Sales Book – a record of the dosh you raked in from sales to your customers; the Inventory Book – which keeps track of your stock; Jobs – a record of employees and payments that have been made to them; and what could be described as “the heart of the accounting system” – the Ledger Book.

A nice feature of these different books is that they share the same interface. So once you are familiar with one book, and familiar with the ideas behind the others, you should have no trouble entering the necessary details into them. Most of them have four main sections – transactions, current accounts, categories and reports.

The Purchase Book has a fairly small number of transaction types, as purchasing goods is a fairly straightforward process. Basically, you purchase the goods, keep and pay for them if satisfied, or send them back if not. The transactions



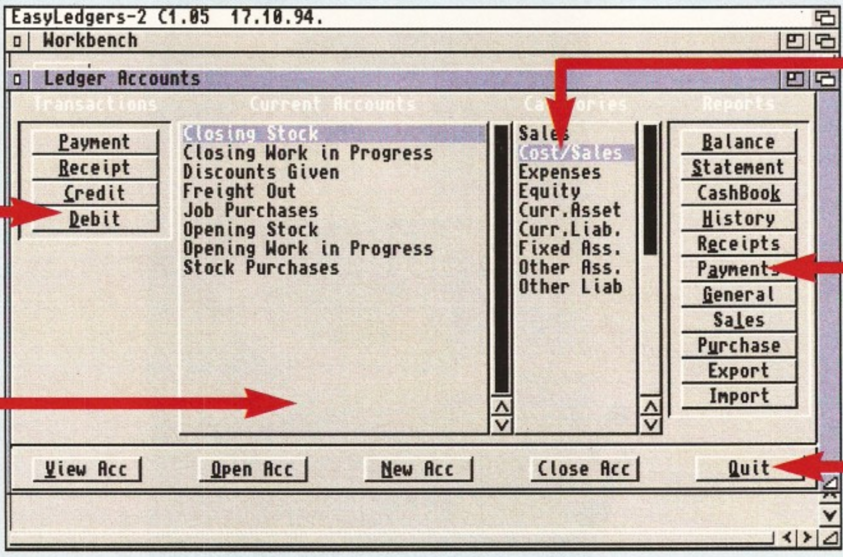
This is the main interface of EasyLedgers 2 – from here you can access any of your books.

A typical EasyLedgers book interface

Here's the Ledgers Book. It's the place where all the transactions come together and gives you an idea how much money you've got.

All of EasyLedgers' books follow this format. These are the available transactions for the Ledgers Book – the other books have more or less the same transactions available.

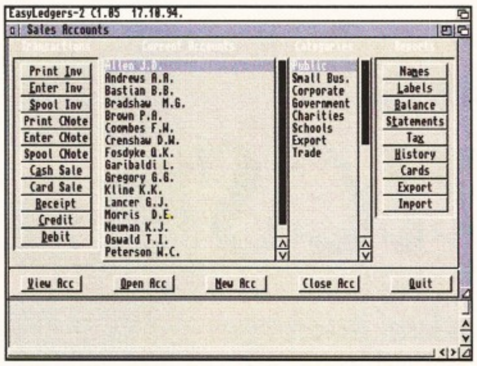
This is the Current Accounts area. It's where the details for each of your customer's accounts can be found.



The Categories function enables you to group your current accounts into, er... catagories.

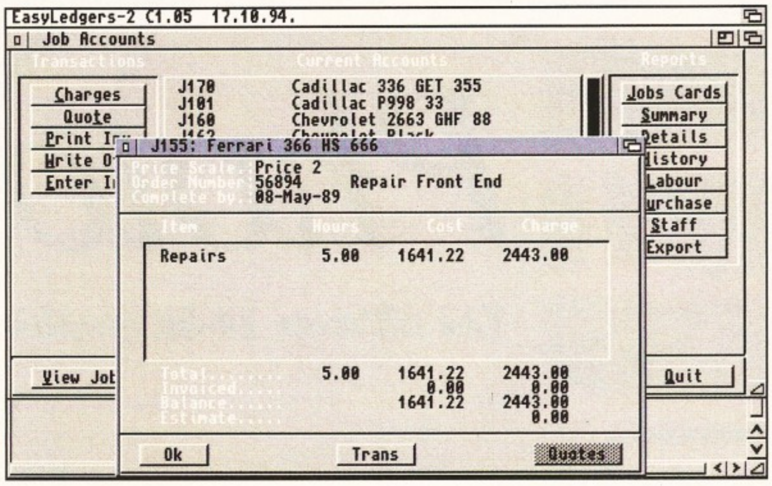
If you would like a report on your current accounts, you only need to choose what you want it to be based on.

This is the quit button Uhh... pressing this will take you out of the book you are currently in.



This is the Sales Book. It's the place where you find out how much dosh you have made and from who.

Would you look at that bill for five hours work! Still, these Ferrari-owners deserve it. Jobs is the part of the program that can be used to price jobs.



that are available are: Purchase, Return, Payment, Credit and Debit.

The Categories function can be used to organise your current accounts. This can be done on the basis of the account's first letter, or any other criterion you may think of. When you click on a category, only the specific accounts that fall into that category are displayed in the current accounts box.

Reports can be produced on one of several factors. For example, you could ask for a report on the accounts by name, balance or labels. This is a quick way of determining the overall status of your current accounts.

The Sales Book is almost a mirror image of the Purchase Book, except it has a few more transaction types and reports. You still have the Credit and Debit transactions, but you also have Cash and Credit Card sales. You can also print invoices which can be sent out to customers. As you are dealing with sales and need to keep account of things like tax and credit card company charges, these have been added to the reports function.

Jobs follows the same format as the others, but, instead of limiting transactions to sales and purchases, you have to take into account materials and labour involved in the completion of a job. What's more, each employee can have their own rate of pay which is then automatically multiplied by the number of hours that member has spent on the job.

Automatic for the people

I've left the Inventory and Ledger books to last, because they are probably the most crucial parts of the program. The coolest thing about these two, in particular, is that they are both updated automatically. For example, if you select a stock item while in the Sales Book and enter it as sold, it will be automatically removed from the Inventory. After all the transactions have been made, you'll find out the overall status of your operations. As soon as you request a report, then the Ledgers Book will look up all the relevant information from the other books.

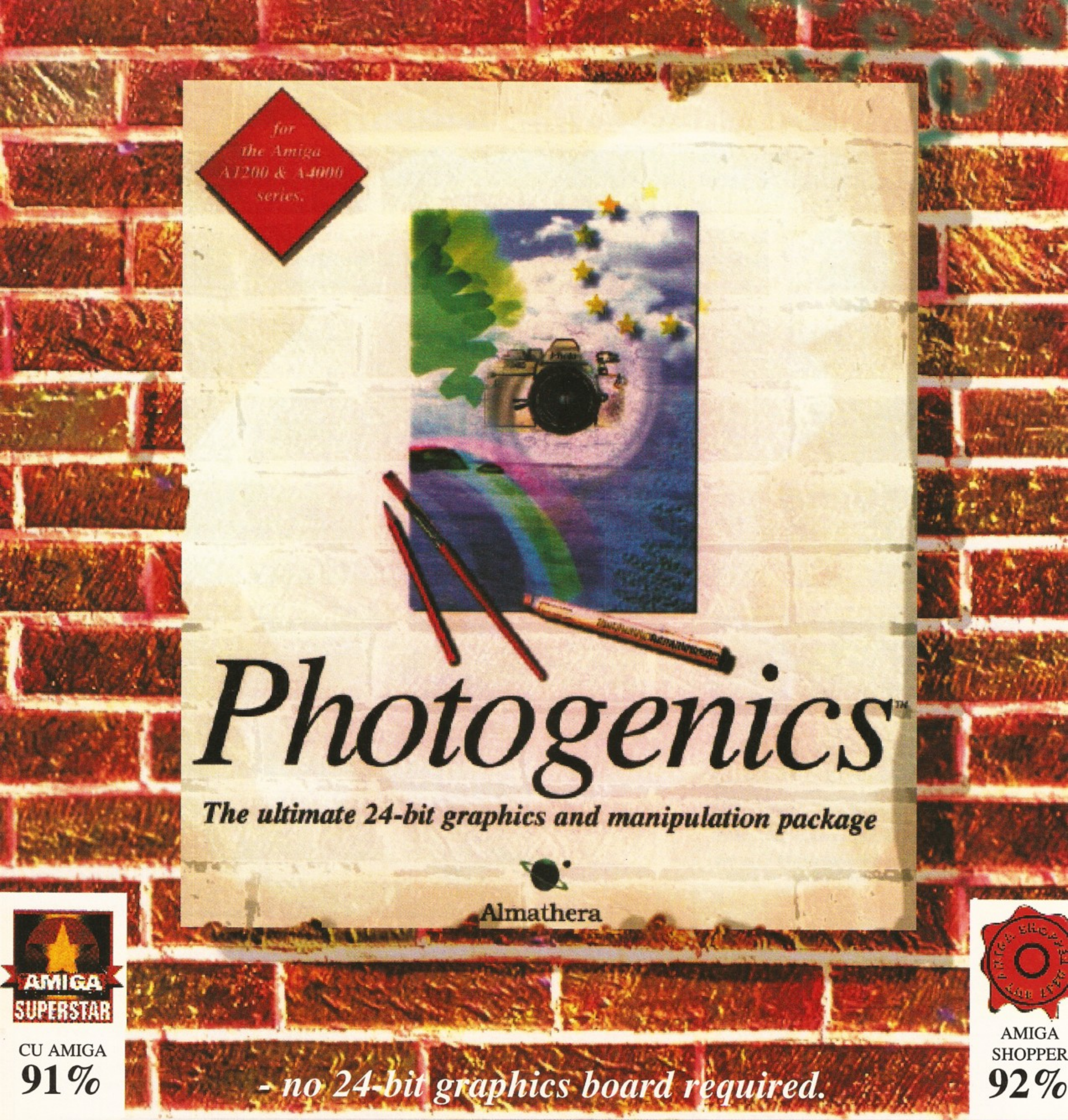
Well it would seem that EasyLedgers 2 is quite integrated. Whenever a change is made in one book that affects the others, as soon as they are opened, *all* the transactions are updated.

So, once you've got all of your inventory set up, you need only enter your transactions and your accounts will be kept current. Of course, you have to get in new stock yourself and make your own sales. In terms of accounting features, I can't really think of any that have been left out – every business-activity is taken care of. In short, EasyLedgers is a complete system that provides the features needed to keep up the accounts of a small business.

That only leaves the big question – is EasyLedgers really worth £200? If I were running my own business, I would probably say yes, but only just. It has all the features; it has the ease-of-use, but it's just a little expensive – £150 would probably be nearer the mark and would definitely have won it a Star Buy award. Then again, as it is really the only option for someone looking to run a business on their Amiga and bearing in mind that it's quite a small market, it might be worth it. So there you have it, EasyLedgers does the job well, it's just about worth £200, but is not really *exceptional* value. ■

Easy Ledgers

Price: £199.99
Supplier: Wizard Developments
Contact: 01322 272908
Verdict: 89%



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CD-ROMs

CD-ROMs are currently one of the biggest growth areas of Amiga software and from now on **Graeme Sandiford** *will be showing us some of the very best offerings every month.*

Welcome to a new regular section of the magazine where we will be taking a look at some of the best CD-ROMs around. This month, we'll be taking a look at an eagerly-awaited LightWave CD-ROM, a German raytracing collection and a double-disc collection from CAM.

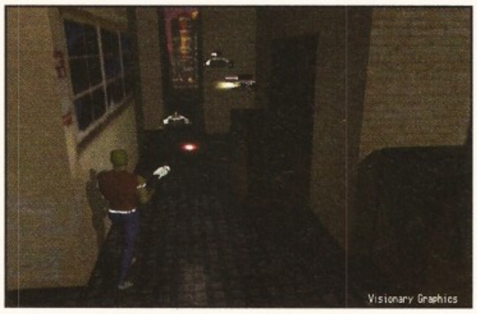
Light-ROM V1.0

Now this is a CD that has been selling really well, no *really* well. PD Soft have been swamped with orders – and that was before they even had any in stock!

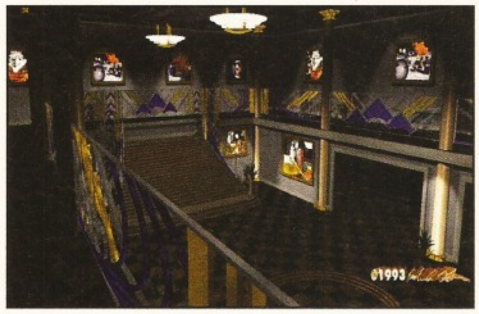
It's a CD-ROM that primarily contains files that can be used with LightWave 3D. However, it can also be used with other 3D packages, because they are directories devoted to Imagine-formatted objects, textures, bump maps, DEMs and even some Fred Fish disks.

If you are looking for inspiration, then you need only look as far as the showcase directory. This contains some absolutely stunning examples of what can been done with LightWave.

Before I go on to rave about the contents of this disc, let me first mention a feature that I've found lacking from most collections. It always drives me up the wall when I come across a CD-ROM collection of 3D objects or images without an index. Thankfully, Light-ROM has indexes for its images and for its objects. They contain thumbnail images of a directory's contents which can give you an idea whether or not you want to load an object, or apply a texture.

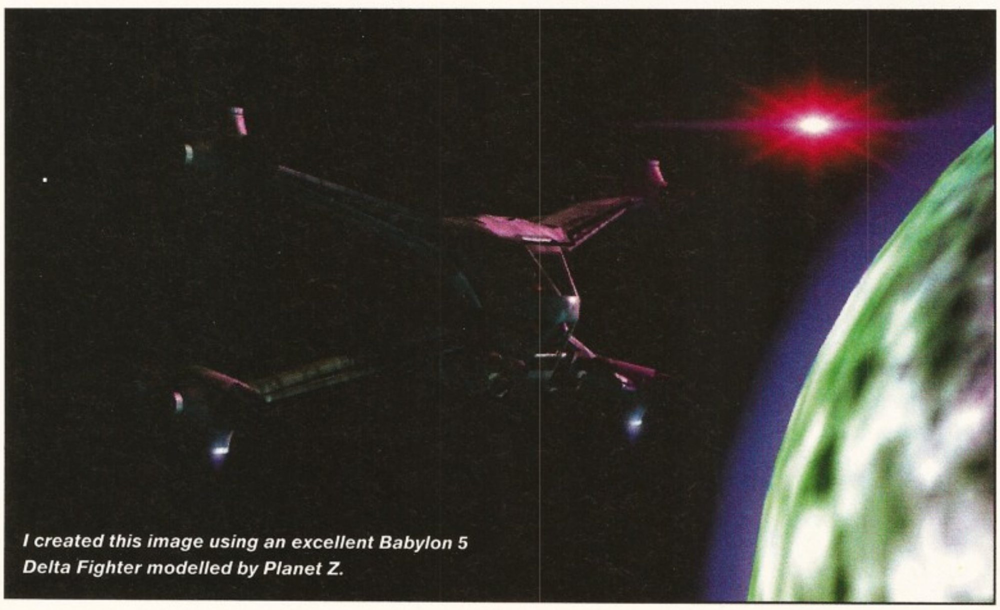


The tension is mounting in this image taken from Light-ROM's Showcase directory.



Here's another example piccy. This atmospheric scene has been created by the ElfWorks.

Right, on to the contents. The first place I went to was, as you might have expected, the LightWave objects directory. Here I was treated to all manner of 3D objects. You'll find everything from flowers to almost every sci-fi spaceship you've probably seen in the last 20 years. As the objects have been modelled by a wide range of people, from hobbyists to professional studios, the quality *does* vary quite a bit. However, on the whole, they are of quite a high standard – the Babylon 5 objects were particularly impressive, especially the Delta Fighter.



I created this image using an excellent Babylon 5 Delta Fighter modelled by Planet Z.

However, this is not an object-only collection and there are plenty of other useful files. Some of the textures are truly excellent, as well as practical. There are also some tutorial scenes, such as the plasma ball from LightWave Pro, and an incredible amount of surfaces. An added bonus was finding the macros directory, which is filled with useful scripts for Modeller.

The surfaces are particularly welcome and they cover several everyday surfaces, as well as one or two more outlandish ones. Some of the basic ones are also subdivided by colour, such as blue, cyan, orange and so on. There are also some organic, metallic and crystalline surfaces.

The FX directory is also a good source of interesting files. It contains scenes and objects demonstrating firework, flame, fountain like, sparks, glint and particle effects.

Well there you have it – it's a CD-ROM jammed full of gorgeous objects and fascinating files. I can understand the demand there has been for this CD and can personally guarantee that it will keep most LightWave users engrossed for hours on end. Don't forget, there are plenty of other files that will be of interest to users of other 3D packages. This has got to be my favourite CD of *all* time.

Light ROM

Price: £39.99
Supplier: PD Soft
Contact: 01702 466933

Verdict: 97% Star buy

Amiga Raytracing (Vols. I & II)

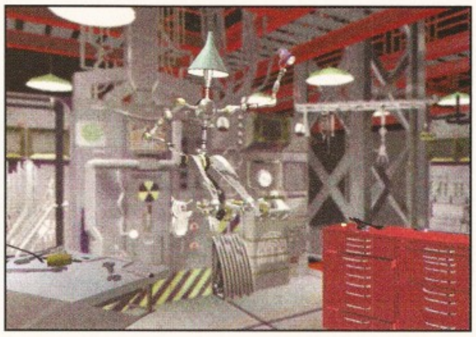
One of the many marvels I encountered while at the Computer '94 show in Cologne was a wide range of CD-ROMs. The first reflective disc that caught my eye was called Amiga Raytracing, containing a variety of files for use with different programs. This includes objects, fonts, 24-bit textures, reflection maps, Imagine attributes, some rendered images and a demo of an older version of Maxon Cinema 4D.

The number of object file formats is quite extensive and includes Imagine, LightWave, Maxon Cinema, Real 3D V2.0, Reflection 1.6 and 2.0, DXF, Sculpt and Caligari. The objects are split into sub-directories which are, of course, labelled in German. However, it's not very difficult to figure out what kinds of objects a directory contains. Although a printout that could be used to determine the quality and exact nature of the objects would have been welcome.

Most of the objects have been collected from PD sources. As a result, owners of collections such as Syndesis' 3D-ROM will already have most of the objects. However, as with the 3D-ROM, these objects are of a generally high standard. Subjects that the objects cover include: biological, computers, architecture, the sea, autos, aircraft, buildings, household items and office furniture. Some of the objects' directories contain a rendered image of that object too. Although not consistently so, this is very handy.

No matter how detailed a model is, it can always be improved by the addition of a good texture. Textures can provide definition, realism and add a finishing touch to rendered images. You'll be glad to know that the discs (vols. 1 and 2) have textures in plentiful supply – I am not entirely sure of the exact figure but, including the bump maps as well as the 24-bit images, it's in the region of 500.

Thankfully, picture indexes have been supplied for these files, so you don't have to view each one individually. There is a pretty good mixture of images, ranging from scanned pictures to what appear to be fractal-generated patterns. The surfaces that have been scanned include a variety of metals, marble, stone and brickwork. The scanned images are of a high standard and are stored as 24-bit IFFs. Storing them as IFFs is a great time-saver, as most 3D packages cannot use JPEGs as textures or bump maps. As JPEG is such a highly-compressed format it's very popular – as a result, several collections store their textures in this format. However, this means you would have to spend ages converting JPEGs to IFFs.



The rendered image of this energetic chap can be found on volume 2 of Amiga Raytracing.

The other directories include some rather tasty real-life backdrops – loads of forests, skies and other stuff – and a demo of an older version of Maxon Cinema 4D. I won't rave on any more about Maxon Cinema, but it is an excellent package that shows a lot of promise. The rendered images directory contains some excellent examples of the work of 3D artists from around Europe. A word of warning about the backdrops though: they are huge – some are over 1Mb in size. The second volume follows pretty much the same format, but doesn't have a demo version of Maxon Cinema.

These are a couple of high-quality discs that should prove useful to most 3D artists. At £19.99 each they make an excellent buy.

Amiga Raytracing I & II

Price: £19.99
Supplier: PD Soft
Contact: 01702 466933
Verdict: 92% — Star buy



Amiga Raytracing volumes I and II are full of detailed images and objects.



The lighting in this scene is wonderful. This is just one of the images on the CAM CD-ROM.

CAM

CAM is a double-disc CD collection that contains well over 950 disks worth of PD. CAM actually stands for Club Amiga Montreal, who are the very same folks who have compiled the disks and this CD-ROM collection.

They have been around for some time now and have amassed quite a collection. The disks have included a number of useful programs and files, but one of the best features of the collection is the way that it is structured. Unlike other large collections, the disks have a theme. For example, you might have one disk full of text utilities and then another of pictures.

The format of this disc is one that is being utilised more and more. All of the contents of the disks are a stored in a single directory of both discs. They have been archived by lha, so, if you know the disk number you are after, you can just wade straight in and extract. If you don't know the disk number, then you'll find the AmigaGuide of great value.

As with the AmiNet CD-ROMs, the guide can be used to find out what is on a particular disk through a brief description, or for extracting them. To extract a file you need only click the disk's extract node. By default the archives are expanded to the DF0: device. This can be changed to another of your choice, such as RAM: or a hard drive directory, by running a script called Whereto.

The document's contents are split into two main areas. The bottom half of the screen has nodes organised according to the themes of the disks, while the top half are labelled by disk number. The themes include: images, animations, games, education, emulation, programming, text, audio, 3D files, graphics utilities, comms, fonts and mixed utilities.

The files go back quite a while and there are plenty of gems to be found. At first I was not very impressed with these discs, but after a few minutes of delving I found a fair number of excellent files and good programs. Two of the highlights of this collection are the animations and 3D disks. The 3D area contained just about every PD 3D object that I've ever come across and a few more besides. The animations include some real classics that are sure to get you chuckling or staring in admiration. ■

CAM

Price: £24.95
Supplier: Almathera
Contact: 0181 687 0040
Verdict: 86%

Textures
Combo Collection

If there is one thing that can give a rendered image that final touch and added realism, it's a finely crafted texture. **Graeme Sandiford** *takes a look at a collection of scanned textures from the United States.*

Good 24-bit textures can sometimes be hard to find and whenever a new set comes out, it's usually well worth a good look. If you have already read R Shamms Mortier's interview with Jeff White of Visual Inspirations (on page 24), you may have caught a mention of their Pro Textures collection.

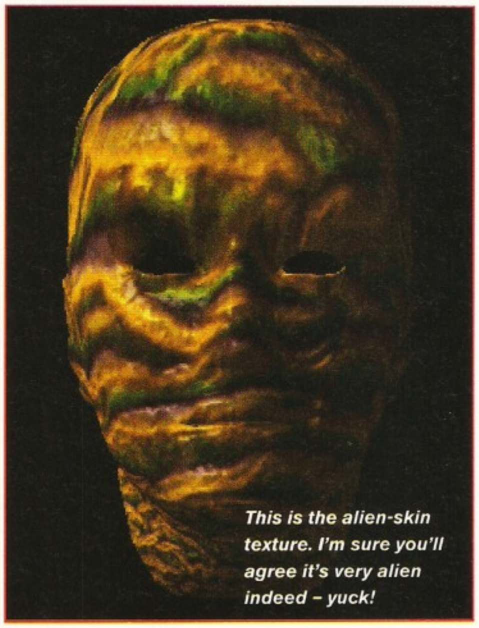
They have been created by accomplished artist, Leo Martin. He's the same person responsible for the LightWave-specific Surface Pro (reviewed last issue – see page 106 for back issues). In fact, these same images were used in Surface Pro. Of course, unlike Surface Pro, Pro Textures can be used with any 3D program, or even video and painting applications.

This is actually a combination of three collections and covers a variety of surfaces. They have all been scanned in and are of a very high quality. The surfaces that have been scanned are: cork, eroded gold, marble, stone-wall, pyrite, rust-metal, rust-stone, pebble, crystal, clouds, flagstone, reptile and alien-skin. They're all very realistic, although I'm not entirely sure how the last two were obtained…

There is usually one factor that can let down a collection of scanned images – tiling. If you apply the images to a large object, you are probably going to need to tile them so that they can cover the whole object.

With most scanned images, there will be an undesirable seam when they are tiled, where the patterns of two edges don't match up perfectly. It's amazing the lengths some people will go to in order to hide seams – everything from rotating an object so that the seam is hidden from the camera, to placing other objects in front in order to cover it up!

This is Pro Textures' strong point; its images are absolutely seamless – you can tile them as many times as you like. However, if you tile an image too many times, you'll probably notice that it has been tiled, as a pattern will start to emerge.



This is the alien-skin texture. I'm sure you'll agree it's very alien indeed – yuck!

Of course, you can do more than simply apply the textures as colour maps. If you have an image processor, for example, you can convert some of the images to greyscale and use them as relatively effective bump maps. In the case of the eroded texture, it could be used to create a convincing lunar surface.

My one reservation with this product, as with most imported American software, is its price. Well, I think I've enthused enough about these textures, so I'll let the images speak for themselves. ■














All of these lovely, lovely textures, and more, could be yours.







Pro Textures Combo

Price: £89.95
Supplier: Premier Vision
Contact: 0171 721 7050

Verdict: 88%

Motion Master volume II

Last issue, **Graeme Sandiford** *reviewed Motion Master volume I from MetroGFX, a collection of LightWave animation utilities. This month he's taking a look at the second volume of the same program.*

Both volume I and II of Motion Master are collections of LightWave animation utilities. I reviewed volume I last month and was impressed enough to want to cast my eager eye on volume II.

Motion Master volume II contains four utilities: Child2World, Wobbler, PointAt and VolumeCube. Installing the collection to your hard drive is very straightforward; you simply need to drag across the programs and example files to a directory of your choosing. However, if you don't have Sparks, also from MetroGFX, already installed, you'll need to copy a macro to your ARexx examples directory.

Dysfunctional objects

One of the most frustrating problems I came across when learning to use LightWave was using parented objects. The trouble is that if you un-parent an object from a hierarchy, it leaps back to its original position. Well, Child2World gets around this irritating quirk of hierarchical animation.

Child2World works by taking the positional information from the parent object and then saving this information to the child object. The program creates motion files for each of the objects, so they become independent of each other.

This program can be particularly useful when you are trying to create a scene where most of the objects stay in a similar trajectory until a certain frame. This is quite a convenient tool and although you could achieve similar functions by using LightWave's 'make key-frame for object and descendants' option, this is a quick way of adjusting to an unexpected change in an animation.

Wobbler is the second program in this collection and its sole purpose is to make your objects wobble – no, really! The idea is quite simple; input a motion and the program outputs a wobbly version.

In order to achieve the desired level of 'wobblyness', you are given control over three factors. These factors are the levels of restoring force, spring damping and blobbyness. The restoring force is the amount of force applied to bring the object back toward its rest position. If you enter a high value for this, the object quickly snaps back toward its resting place, as if attached to a taut spring. A low value has more 'give'.

Spring damping is the force that stops the object from bouncing indefinitely. The higher the value entered, the longer the object takes to return to its resting position – because its 'springiness' has not been dampened very much.

Entering a high value for blobbyness results in a second motion file being written. This new file contains scaling information that can be used to stretch or squash an object. A simple use for this is a ball squashing slightly as it rebounds.

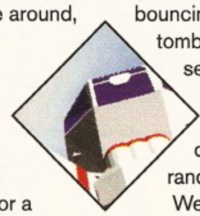
Applying these effects to an object can produce some impressive results. However applying them to bones can produce amazing realism – such as muscle quivering, or fat wobbling. This is an incredibly useful program to have around, because it's so versatile and can add that finishing touch to an animation.

Pointless?

One of LightWave's coolest features is the ability to target an object with the camera, or a light. It's a shame you can't make an object target another object – oh well, maybe in version IV. But, in the meanwhile, you might try using PointAt – it does the same thing.

Targeting can be useful in a variety of scenes, especially in ones that involve tracking guns, or emulating turning machinery. It's a relatively simple tool, but one that is potentially invaluable.

The final program is VolumeCube and it has quite an interesting principle behind it – random walks. This has absolutely nothing to do with any outdoor canine-related activities, rather it's a way of randomly controlling a group of objects. It's an alternative to methods, such as flocking, that attempt to generate natural-looking motions for several objects.



VolumeCube restricts the movements of an object to a cube-shaped area. So, while the objects can move randomly, their *overall* movement is governed by the path of the volume. If an object comes into contact with the cube's sides, it bounces off.

A fairly limited use of this program could be having a cube rolling with several objects inside bouncing around (excellent for emulating a tombola). On a larger scale, you could have several cubes with an object inside each, such as a bird of fish. This enables you to keep control over the general position and direction of the objects, while retaining a random element.

Well, that's all four programs. As with the first volume, I think this collection is a tad over-priced. But, nonetheless, Jon Tindall has created an excellent collection that saves hours of tedious key-framing and helps you to produce professional-quality animations. ■

Motion Master v. II

Price:	£119.95
Supplier:	Premier Vision
Contact:	0171 721 7050

Verdict: 91% — Star buy



PointAt was used to make the missile in this scene target the plane.

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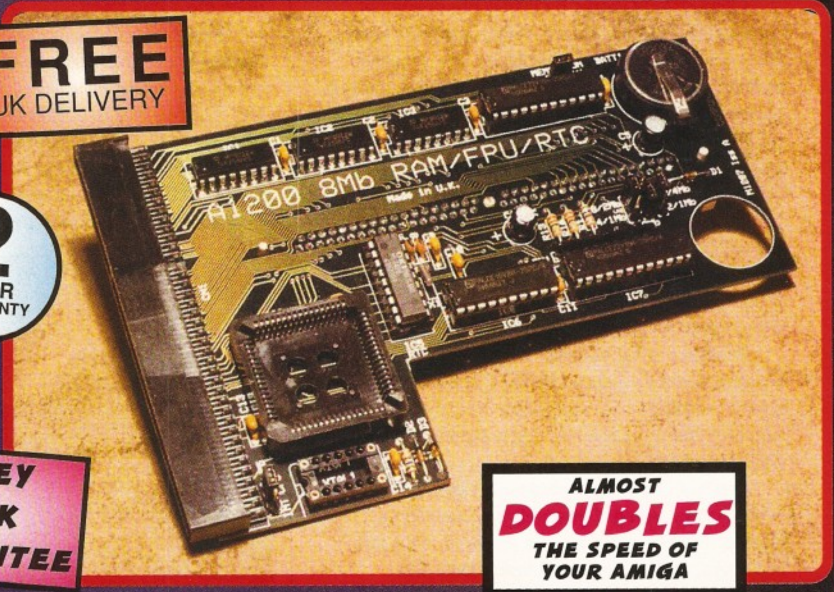
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Sort it!

Graeme Sandiford *checks out InfoNEXUS and wonders whether it could help him sort his life out.*



The file manager InfoNEXUS can be used to display AGA and 24-bit images on any model of the Amiga.

There is one piece of software that you will find on any serious Amiga-user's hard disk, regardless of the use they put their machine to – a file manager. Whether you use your Amiga for producing animations, or for running a small business, you are going to need some method of file control.

InfoNEXUS is just that, a file manager. Of course, we couldn't possibly get through a review of a file manager without mentioning Directory Opus 4, or the forthcoming version 5. Despite a short-lived challenge from DirWork, Opus has had a firm stranglehold on this market for some time and it would be interesting to see if InfoNEXUS will be able to finally break its hold.

The program's developers, Optonica, have been working hard at trying to make it as simple to use as possible. Once it has been installed, the program requires no further configuration; in fact it can be run straight from the floppy it's supplied on. At a price of £30, it also seems that they are targeting InfoNEXUS at people who cannot afford the £50 that Directory Opus will cost them.

It has a similar range of functions as Opus 4, plus a few more. One of its strong points is its operation over a Envoy-based network. It also plays CDXL files, and even emulates a CD-ROM drive if the file is not being played back from one.

As with any program whose purpose is to make your life easier, a good interface is an important feature. Personally, my first reaction on running InfoNEXUS was 'yuck'! But after taking a closer look, beyond the vile colour-scheme, I realised there were a couple of interesting twists.

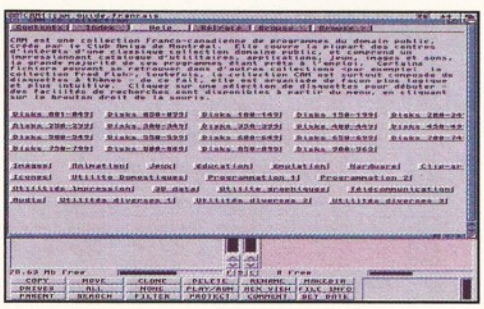
One major new feature is the Pop and Roll menu system. Instead of pulling down menus from the top of the screen, each time you press your right button a small menu bar appears at the pointer's location – er… that's the Pop. You can then pull down the menu you are after. The Roll plays a part when there are several options available for the same menu item. You can Roll through the available options by clicking on the item with your left button while still holding down the right.

File-pushing

Of course, you'll want to do more with your file manager than simply push files around your hard disk. It's nice to be able to view images, read documents, play sounds and listen to music without having to switch to a different program. As with Opus, InfoNEXUS can do all of this internally. In addition to that, it can also be used to execute programs and scripts.

However, the feature that had me leaping around the offices and behaving in an entirely unnecessary manner, was the support for DataTypes. One of the things that I find a little annoying when using Opus 4, which is everyday, is switching to an external program to view a JPEG or read an AmigaGuide document. OK, so it is possible to configure a button to launch a viewer, but it is more than a *little* fiddly and is by no means an ideal solution. As more DataTypes become available, this is going to become an even more important feature.

Another unique feature is the recursive option that some functions have. In essence, it's a way of controlling the extent, directory-wise, to which changes are made. For example, as well as being able to rename all the files in a directory, you also have the option to rename any of the files within directories within the source directory. While I'm talking about renaming files, you can also prefix or suffix the filenames of a selection of files, even adding a sequence of numbers if you wish.



Thanks to support for DataTypes, InfoNEXUS can read AmigaGuide formatted files.

Overall, InfoNEXUS provides pretty much the same number of features as Directory Opus 4. However, it's just not as readily configurable as Opus – you can set almost all of the preferences, but not as easily. Although, one thing that *does* need consideration is that I have been using Opus for years. Which doesn't mean I'm biased toward it, just that it's what I am used to.

There are only two main grumbles that I have about InfoNEXUS – these are that damned purple/blue screen palette, which I have not been able to change yet, and the manual. The second of these is probably the most important, but perhaps not quite as infuriating as the first. The manual was really disappointing – it was more or less simply a long list of the program's features. Although this was split up into a few different topics, it really wasn't enough. It could have done with an index too. If there is one thing I can't stand, it's trudging through a manual when an index would enable me to skip to the important stuff.

Overall, though, I was quite pleased with InfoNEXUS. It avoided completely copying Opus' interface and has incorporated some novel features at the same time. Although I still prefer Opus, InfoNEXUS has earned itself a place on my hard disk for some time. ■

InfoNEXUS

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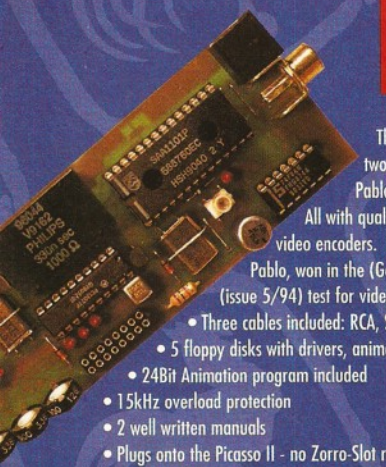
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● Amiga A1000 wanted. Must be in good working order. Phone Jason on ☎ 01225 442244 (extension 2338). Good price paid.

● Imagine 2.0 reference book wanted "Understanding Imagine", by Steven Worley. ☎ 01723 378 406.

● Amiga 3000 25Mhz – must have at least 4Mb RAM, 100Mb HD. Multi sync monitor. Call Nick ☎ 01462 456 721.

● GVP 4Mb 32-bit SIMMS, also Quarterback manual V6, or details of use with TapeStreamer. Dog destroyed my copy. I am buying Streamer, and want operating instructions. Advice George Aldridge ☎ 01573 224 632.

● A1200 with monitor – I am willing to swap for an A500 1Mb Workbench 1.3.2 and accessories. Willing to pay reasonable price for swap. Call James every day except Sundays. No games needed. ☎ 01525 240 673.

● Has anyone got a A5000 accelerator working with a A500+ and A590 hard drive. If so, please tell me how. Write to M Heath, 14 Kitchener Street, Swindon, Wilts SN2 1EZ.

● Flicker Fixer for A1500 or A200. Microway of ICD etc. Reasonable price paid. Contact Mick, 27 John Clare Court, Kettering, Northants NN16 9UJ.

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Personal

● Enthusiastic, recently self-taught programmer, wants to get into games programming on the Amiga, would like to meet enthusiastic artist who enjoys creating computer graphics. Call Sterling ☎ 0181 677 3110.

● PD swappers wanted. Mail me your list and I will contact you back, speed and number of disks not important. Contact Johnny, Ljunggren, Marveien 2, 3/60 Stokke, Norway.

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● Graphic artist wanted, write to Willowside, Holly Road, Uttoxeter, Staffs ST14 7NA. Also looking for musician.

● Astronomy diskzine needs pictures/articles, free diskzone for contributions used. Send with s.a.e. to Wolfpack, 7D Ferrier Crescent, Woodside, Aberdeen AB2 2QL.

● **Artists,** programmers, musicians wanted for contacts. Urgent – 1,000% reply guaranteed. Easby House, Front Street, Appleton, Wiske, Northallerton, North Yorkshire DI6 2AD. ☎ 0609 881609, ask for Jason.

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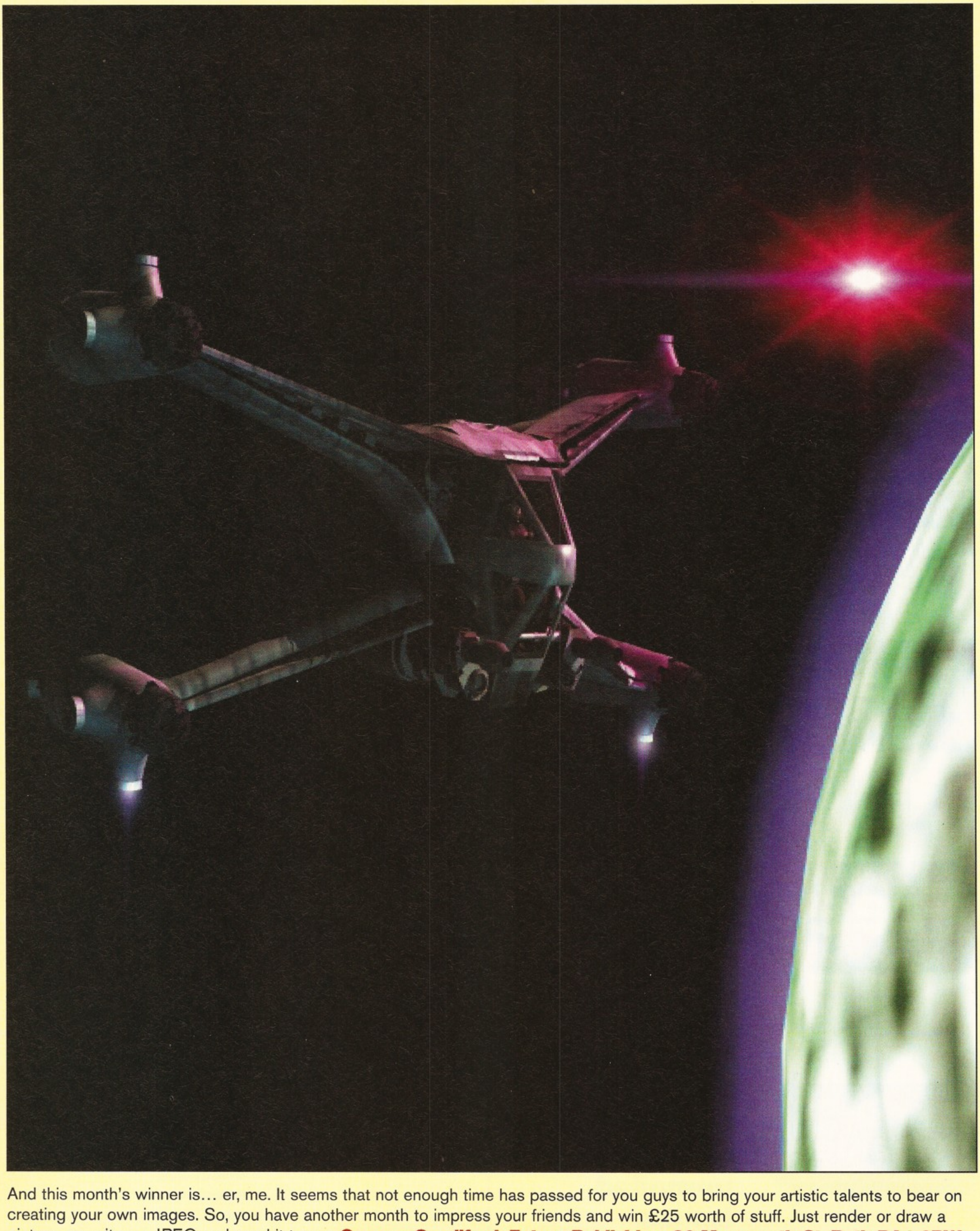
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And this month's winner is… er, me. It seems that not enough time has passed for you guys to bring your artistic talents to bear on creating your own images. So, you have another month to impress your friends and win £25 worth of stuff. Just render or draw a picture, save it as a JPEG and send it to me: **Graeme Sandiford, Future Publishing, 30 Monmouth St, Bath BA1 2BW.**

AMIGA ANSWERS



Hello, and welcome once again, to the area of Amiga Shopper where you can turn to find all the answers to questions concerning your Amiga. It's my privilege, as Amiga Shopper's technical writer, to make sure that not one of your problems is left unsolved. Let me present this month's team of Amiga experts. Jeff Walker is our desktop publishing, fonts and printer correspondent. Gary Whiteley is an expert on video applications and graphics. Finally, we've got a man you can rely on when it comes to operating systems programming and music making on your Amiga – Paul Overaa. So, stop worrying.

Answers contents

If you are looking for a solution to a particular problem, why not try using this handy index to the questions in this issue. It's arranged by topic, so if you are being kept awake at night by a noisy hard drive, then be on the look-out for any mention of hard disks.

Weird Vistas

Software

I have a problem with a piece of software I recently purchased – Vista Pro 3.0 (v3.05). I'm using it on an A1200 fitted with a Blizzard 1220/4 28Mhz turbo card fitted with a 33Mhz 68882 FPU and an 80Mb Western Digital hard drive.

When I try to run one of the animations (rendered using one of the supplied scripts), they seem to render OK, but when I come to play them back with the supplied Viewer software, the colours are totally corrupt, except for the first frame, which looks fine.

I read somewhere that sometimes the MaxTransfer rate of the hard drive being set too high can give problems similar to those which I'm experiencing. The advice was to remove one of the 'Fs from the rate using HDToolBox. The example shows the transfer rate as ending in a series of 'Fs' – but HDToolBox tells me that my transfer rate is 0x1fe00, which isn't the same. So I don't think I can remove an 'F' as advised. Do you have any idea what might be going wrong to cause these problems?

Incidentally, Video Tracker now locks the Amiga out when I try to play a Video Module. It didn't do this before I installed the Blizzard card. Do you think that the two problems may be connected?

Andrew Smith
Stechford, Birmingham

Initially, I thought that this might be a simple palette locking problem, since this will exhibit symptoms similar to those you describe. What happens in such cases is that each frame of an animation will be rendered and saved with its own unique colour palette. When the resulting animation is played back only the first frame will look right because the player program's palette is derived only from this image. If the other frames aren't remapped to match the palette of the first frame then the result is a mess.

Unfortunately you've not provided any details about what modes and resolutions you've been trying to render in, so I can't attempt to recreate the problem you describe, though I did do a few test-renders myself and had no troubles at all.

Before you get involved with possible hardware paranoia (even though it could well be out to get you) just double-check that you've not been trying to render the images in DCTV or any other non-standard format. You could also try different render formats (32 colour lo-res, HAM etc) when you make your VAnims and see if they cause any differences. Perhaps there's a memory shortage going on which could account for your problems, and this might prove it.

There are a couple of things you could try before you start hacking at your system settings. The first is to render the animation to RAM:, though you might have to modify the script to produce less frames (and hence a smaller animation file), or set the graphics size so that the images are rendered at a smaller size.

The second thing is to remove the Blizzard card and try the process again, this time making allowances for the reduced memory. This of course depends whether Vista will run in the 2Mb of memory you'll have left. I'm not sure whether it will or not, so you'll just have to try it. In any event, if the sequence plays back properly from RAM: or without the Blizzard, then it's most definitely time to start worrying.

Whilst the problem with Video Tracker may be annoying, it's difficult to know whether it is connected with the Vista problem. Some programs just don't like certain accelerators and Video Tracker may be one of those programs

which is somehow incompatible with the Blizzard card.

On the other hand, you may well be right that the problem lies with your hard drive and its transfer rate. Which leaves me with a problem, because such things are beyond my Amiga knowledge and I'm afraid I can't be of any further help. I'm sure that if any reader has a clue about what's going on here, or have had the same problem, then they'll write and let us know what the solution might be. **Gary**

No DeskJet colour

I have a Hewlett-Packard DeskJet 550C attached to my A500 (Workbench 1.3.2) and it will not print full colour pictures, only black and white.

I can get colour output if I use the HP_PaintJet driver, but the pictures are very small and the colours are not correct.

R T Jones
Pengam, Gwent

The news is good and bad. The good news is that if you contact a PD library, you will be able to get a few DeskJet printer drivers that will print in colour from your 550C. The bad news is that modern printers like the colour DeskJet, Epson Stylus, Canon BubbleJets, high-res laser printers and so on, are not properly supported by the Amiga's outdated printing preferences system, so controlling things like colour and getting the best possible output is impossible, unless you buy some third-party printing software like Studio Professional II.

The trouble is, modern software like Studio demands a more modern operating system (OS) than the one you are using. Without upgrading to OS 3.1 or buying a more modern Amiga, I'm afraid you will simply have to put up with relatively poor output from whatever PD printer drivers you can find. **Jeff**

It just stopped working

I installed some Compugraphic fonts using Fountain and I used these for many months. Then, a while ago, I found that I could no longer use them and Fountain no longer works, putting up an error message: "Couldn't load _bullet_outlines/if.uc". I have checked my backup, original fonts disk, and all my other discs, and, *believe* me, it is missing. Help!

Daniel Dobson
London

Don't know why you are getting that error message because both Fountain and Intellifont (that's the Workbench 3 version of the same program) look for the "if.uc" file in "FONTS:_bullet" not "FONTS:_bullet_outlines". I just looked at my standard Workbench 2 and 3 Fonts disks and said file is there in said drawer.

The best thing you can do is simply re-install Workbench and the Compugraphic fonts system on to your hard disk. You won't need to back up anything, as all this will do is re-install the original system files; nothing will be destroyed.

Jeff's Rule Of Thumb #1: Whenever anything that used to work stops working, remove absolutely all PD programs from your boot sequence (no matter how much you like them) and then re-install Workbench. **Jeff.**

Toaster, Toaster, wherefore art thou?

Can you please inform me as to who the registered distributor of NewTek's Video Toaster in the UK is, as well as of LightWave 3D?

James Rothschild
Bradford, W. Yorks

As far as LightWave 3D (the standalone version) is concerned the master distributor in the UK is DPS (☎ 01252 718300). They supply other companies, such as Premier Vision and Ramiga International. For the Video Toaster, try calling Ramiga (☎ 01690 770304).

If you wish to contact NewTek directly in the USA, call them on ☎ 0101 913-228-8000 or fax 0101 913-228-8099. **Gary**

Give me five

1) How do I convert fonts from other formats to use them in Final Writer?

2) Is it possible to get a book which shows me examples of fonts and clip art before I buy them?

3) Why do screen fonts in Protext and even on my Mac Powerbook look so much clearer than those in Final Writer?

4) What packages would you recommend in order to process (enhance, that is) and prepare imported black and white photos from a Mac for printing in black and white or greys on a Canon BubbleJet?

5) I intend to buy more memory – at least 4Mb. Will this mean that I will be able to use the black bands which appear on either side of useable screen on my monitor?

Pete Scott
Warminster, Wilts

***1)** Buy TypeSmith.*

2. If you are talking PD fonts and clip art, the short answer is no, although LH Publishing (☎ 01908 370230) has published one book (called Fonts & Clip Art) that contains some of the more popular fonts and clips that are doing the rounds. Bit of a pricey catalogue, though, at £9.95. EMC (☎ 01255 431389) does a decent information pack for £1 and a 25p stamp, which, while not a book, is more comprehensive.

***3)** Because Final Writer is using scalable fonts and for the sake of greater display speed it is scaling the fonts roughly. To scale them accurately would take so long (even on a very fast Amiga) that typing would be difficult. Protext uses bitmapped fonts, which can be displayed very quickly indeed, but which cannot be scaled very well without them looking even uglier than rough-scaled scalable fonts.*

***4)** If you don't have at least 10Mb of total memory, I wouldn't like to recommend any package to you. If you did have the memory, I'd highly recommend ImageFX 2, which is the nearest thing the Amiga has to the famous Adobe Photoshop. Or, if you're on a tight budget, Photogenics (but don't expect the earth for £55).*

***5)** No, this has nothing to do with memory. In some screen modes on almost all monitors, parts of the visible screen are not useable. Fact of life. It has to do with frequencies and stuff.* **Jeff**

Imagine that

After reading the recent AS guide on how to make a LightWave 3D model, I decided to attempt it in Imagine 2. I had dabbled in Imagine before, but gave up due to the amount of time it took. Anyway, all was well in the model-making and I made a decent copy of the ship, complete with grouped arms. That was hard enough (no instructions), but the arms work OK, even in the Cycle editor (it took a while to work out how the Cycle set-up works).

The problem was the brush mapping. I followed the guide and grabbed a screen shot of the side of the ship and drew my colour and diffusion maps. I then flat X/Z mapped the colour map. It did not work. Well, it took me four hours to realise that Imagine had mapped it to the back of my model (it faces into the screen in the Front window), so I adjusted the axis so the map went along the right side of the ship and all was well. Now my questions.

1) When I made my brushmaps in DPaint IV, I picked them up as a brush. The black background (Colour 0) was not picked up (I even tried AutoTransparency). Now when I map it on to the ship, the background colour covers the areas where I wanted the Imagine attribute colour (green) to show through – see the IFF files on my disk for more information... I tried changing the background colour to white, but, alas, with no luck.

I've included the following images on disk, in case they may be helpful to answering my question:

Colour.map – Shows my colour map
Ship.iff – Shows Quickrender of basic ship
Filter.iff – Shows my Filter map
Brushmap.iff – Tries to explain question 1
Quick_1.iff – Quickrender Trace of my ship without the brushmaps. (low-res)

2) What does Imagine use in place of LightWave's diffusionmap? I thought it might be a filter map, but I can't get the effect that the guide gets. All I get is a transparent-looking ship. Can Imagine do this effect?

3) In an Imagine animation, how do I get a rotating gun that is grouped to a spaceship that's moving along a path to track another object going along a different path? (Catch my drift?)

4) When I have created a cycleable object and I change it in the Detail Editor and then put it back into the Cycle Editor, it sometimes comes up with an error "Not a 'proper' animated object".

What does it mean and how can I avoid this? I have tried ungrouping the object then re-grouping it and selecting Cycle set-up in the ▶ 67

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64 menu, but it still won't let me load the object in. HELP! An answer in your magazine would be appreciated.

Dave West
Sunderland

From your comments I see you've already discovered that Imagine doesn't follow the generally accepted convention of Y being the vertical axis! Instead Impulse, in their own idiosyncratic way, have, ever since they launched Imagine's distant predecessor "Silver", transposed the Y axis for the Z axis.

Now let's answer your questions in the order you asked them.

***1)** What you need to do here is to ensure that the "Use Genlock" button is activated when you set up your brushmap (you'll find it in the requester where you set the type of wrap, etc). All the parts of your brush map which contain Colour 0 will then become invisible, leaving only a 'decal' of your brush mapped on to the object's surface. Note that it is CRUCIAL that when you pick up the brush you make certain that you also pick up the Colour 0 colour (by specifying a colour which isn't used in the image as the 'background' palette colour in DPaint), otherwise this effect won't work. I'd advise you to stick to a Colour 0 of R0,G0,B0 to be certain that the genlock effect will work.*

Some opinions say that the Full Scale setting should also be set to 240 (instead of 255), but it doesn't seem to make any difference to me. It's also worthwhile checking that your COL0 setting in Imagine's Preferences is set to the same as your Colour 0 colour, but, again, changing these settings didn't make any difference in my tests. However, I did this using both Imagine 3 and, later, Imagine 2 and in both cases the Genlock button works identically.

***2)** There's no direct equivalent to LightWave's diffusionmap in Imagine 2. Imagine 3 has Reflectivity mapping, which can produce something similar, but it really doesn't have the same effect.*

***3)** Now this is a tricky one. Imagine 3 has a new command in the Action Editor – Associate – which makes the movement you require fairly simple to create, but unfortunately Imagine 2 doesn't have this.*

To see if I could figure out your problems, I put Imagine 2 back on to my Amiga (I've not used it for over a year now as Imagine 3 is much better – why not consider upgrading? The manual is a big improvement too!) and tried out several ideas which came to mind. The only (and barely adequate) solution I came up with is to split the gun barrel from your ship object and save it as a separate object.

Then, when you've made your ship's path, clone it and offset it so that the barrel moves along this path (it won't be easy to get the barrel's path in just the right place though). Make sure that the barrel is "Aligned" to the object you wish to track (using the barrel's Align time line in the Action Editor) and also ensure that the Y axis follows the length of the barrel when you save it from the Detail Editor.

While we're on this topic, you might feel happier knowing that LightWave can't do what you're asking either, though it's much easier to get the effect you're asking for in LightWave by parenting the gun barrel to the ship and then manually aligning the gun to track the target over a series of keyframes.

***4)** Again, Imagine 3 has forged ahead and Cycle objects are no longer the best way to do such things – and I'm glad! Cycle objects always were a real pain to work with and even when you think you know what you're doing, things seem to go wrong for no reason. The new States in Imagine 3 are much simpler and far more effective to use.*

The best advice I can give to this question is to get hold of an Imagine 2 manual and study it well, experiment long and hard and finally see if you can get Cycle objects working successfully. As I said, it really is a hit and miss affair and I wish you the best of luck.

One final point. Software like Imagine and LightWave can be very difficult to use successfully without a manual. Whilst Imagine 2 was a great bonus for Amiga Format readers, the obvious idea behind it being easily and freely available was to get folks to upgrade to Imagine 3 and benefit from the new features and new manual whilst spending money into the bargain.

If you want to do more complex work (such as you've described in your letter), then you really should consider buying Imagine 3. Emerald Creative have been selling it for under £100, which is really a very good price, so, if you can afford it, go for it. If not, try to find an Imagine 2 manual or, better still, Steve Worley's excellent (though now rare as hen's teeth) "Understanding Imagine 2" publication. **Gary**

Monitors again...

Monitors

I have a Mitsubishi SVGA colour monitor (model FA3415ATKE) with a 15-pin connector. Is there any way I can use this with my Amiga 600? I know that a VGA adaptor exists for the A1200, but have not seen anything for the A600.

If such an item exists would you please tell me where I could purchase it from?

Alan Walker
Wirral, Merseyside

Unusually for a query of this kind you be glad to hear that I have reasonably hopeful, if not exactly good, news.

After speaking to Mitsubishi's Technical Support I can tell you that your monitor will (in theory, at least) sync down to 15.7Khz. So, if you're lucky and the spec of the monitor is slightly out (i.e. if it really syncs to 15.6Khz or less), it might just be possible that the monitor will work with your A600. I say "possible" because there can be some leeway here and it may be that the sync rate doesn't quite get down as far as it might (the tech support guy was at pains to stress this), so it could be that the monitor won't be able to lock on to your Amiga's RGB output after all, but it's certainly worth a try.

The pin connections on the monitor which you'll need to connect to your Amiga's RGB port are as follows:

Amiga	RGB	Monitor
3	*RED*	*2*
4	*GREEN*	*4*
5	*BLUE*	*10*
11	*HSYNC*	*9*
12	*VSYNC*	*8*
18	*GROUND*	*6*

If the monitor doesn't work at standard RGB PAL Amiga levels, then I'm afraid there's not much left to be done as there are no de-interlacers for the A600 available, as far as I am aware. A de-interlacer would be needed to increase the video frequency to around 31Khz so as to drive the monitor correctly. On the other hand, this monitor will probably work nicely with an A1200, should you ever choose to buy a better Amiga. **Gary**

Voice layering

Music

When recording from a MIDI keyboard, how do you layer different voices? My sequences play back using whatever voice is currently selected.

Also, is it possible, with Music-X 2.0, to replay music from disk which has been recorded via the mother keyboard without the mother keyboard being available. It seems of limited use to me if you have to carry your keyboard around in order to demonstrate your efforts to friends.

One last thing; I've got a Yamaha PSR47 and a Datel MIDI interface. When I try to record things with Music-X, OctaMED or Sequencer One, I suddenly find that certain notes won't play. There's no telling when this might happen and it happens even when playing single note melodies. I have changed the MIDI interface and the MIDI leads, but the keyboard still keeps going quiet on me?

D.F. Cussell
Margate, Kent

The most likely reason for your MIDI sequences playing back using the currently selected sequencer voice is that your sequences are not telling the synthesiser which voices to use in the first place. In other words, there are no program change commands in the sequences. To create layered voice effects with a sequence recorded on a particular MIDI channel, all you have to do is copy the sequence as many times as you want different voices and then re-channelise them so that each copy plays on a different MIDI channel.

Having done that, add a program change command to the front of each version of the sequence so that the voices you require are selected. If necessary, you can enhance these resultant layering effects by slightly off-setting the timing of one track, or by transposing one or more tracks up or down by an octave. Layering is normally used to 'thicken up' weak-sounding voices, but there is another way of doing this – with synthesisers that allow a combination of separate voices to be assigned to a particular MIDI channel.

Basically, you set the synthesiser up so that a suitable 'voice group setting' is selected for a chosen MIDI channel and then assign that group setting to a single program change command. Although this is less flexible than the 69

67 *first true 'layering' approach, this latter technique has the benefit of not requiring so much MIDI data to be sent down the MIDI lines!*

Music-X 2.0 supports the use of Amiga internal sounds so, as far as playing your sequences without using your synth is concerned, all you need to do is use the Music-X 'Amiga Samples' Mode menu option. This will take you to the page display that allows you to assign IFF samples to particular MIDI channels. Once you've assigned the various channels of your sequences to suitable internal voice sounds, you'll be able to play your compositions without having your external MIDI gear connected!

As far as your intermittent note loss is concerned, it's almost impossible to sort these sorts of snags out without actually sitting in front of your MIDI gear and experimenting. Nevertheless, I think you can assume, since it happens with all three software packages that you are using, that the problem isn't software-related. I also think that, because of the intermittent nature of the fault, you can rule out ideas about damaged Amiga serial I/O chips and so on. That leaves your interface, your leads and connections, and your synth.

If the synth is old, or in poor condition, then it could be something like dirty key contacts. Is it always particular notes that are affected? If it is, it might simply be that you sometimes press a key slightly lighter than you normally do and, on these occasions, the note does not sound? Similarly poor MIDI lead connections can sometimes cause intermittent faults.

You say that you've checked various things, but have you done it in a methodical way? You need to determine exactly where the problem lies and the best way to do this is to test the various components of your MIDI system in isolation. Do you have a friend with a sequencer set-up that you could make use of for a half an hour or so? If so, then connect your synth to this system (by the way, don't use your leads, or your MIDI interface – use your friend's).

If you cannot duplicate the lost notes fault using this second system, you'll know your synth is not to blame.

Next thing to do is try this duplicate MIDI system, using your MIDI leads. If problems are still absent, then try your friend's MIDI system as normally set up, but using your MIDI interface. With this sort of approach, you should soon be able to locate the source of the trouble. **Paul**

RGB or video monitors?

Q. I have my Amiga connected to my TV from a modulated video output, but my friend has his connected to a proper RGB monitor. His display looks much better than mine. Why?

Alex Large
Godalming, Surrey

A. Your friend's monitor looks better because it is translating the Amiga's video output into a picture in the most direct way – straight from the RGB (Red, Green and Blue) port to the monitor's own RGB display circuits, with the minimum of electronic circuitry in-between.

In the case of your TV, the Amiga's internal RGB video signals have first to be converted to a modulated RF signal, meaning that the RGB components have to be combined together and then modulated into a signal suitable for transmission to your TV.

Once inside the TV, they must be demodulated and converted back to RGB so that the monitor can display them and, as a result of this modulation and demodulation, the original Amiga RGB signal will inevitably become somewhat degraded. Obviously the best solution, if you can afford it, is to buy an RGB monitor. **Gary**

Microvitec Boarder problems 1

I have purchased a Microvitec 1438 monitor and, having successfully installed it and adjusted the relative overscans, I find that the DBLPAL and Productivity modes both produce a border of about an inch left and right when displaying the Workbench window – i.e. the mouse pointer will not enter these areas (not to be confused with the quarter-inch black border which is standard with Microvitec). Is there any way of overcoming this problem?

Incidentally, using Super72 Super hi-res laced mode produces a full-screen picture, but with colours which appear washed out, even with full brightness. Is this normal?

Alan Haywood,
Woodford Green, Essex

Microvitec have been very good with their response to this and they rang me back several times to make sure I was being sorted out. They did this mistakenly believing that I was an actual customer (even though I had initially explained what I was doing), so if this is normal customer service, then I, for one, am impressed!

The border problem is to do with display frequencies of the DBLPAL and Productivity modes and the need not to overdrive the monitor's display electronics and possibly lead to safety hazards. For such a screen mode to fill the entire display area would require more voltage being sent to the display components than they might safely be able to handle, so instead the picture display area is reduced.

The result? End of possible safety hazard, but smaller image size. Microvitec pointed out that they often provide monitors which are factory-adjusted to suit the customer's specifications, although I pointed out that most Amiga/1438 owners wouldn't have been aware of that from their adverts in Amiga mags and when they bought their monitor from a dealer.

Whilst it is often possible to overcome screen-size limitations by adjusting a monitor's horizontal and vertical widths to fill the screen, again the Microvitec design precludes this for the safety and tolerancing reasons outlined above. Hence, to stop your monitor blowing up, or giving you a few more X-rays than you bargained for, the DBLPAL and Productivity modes won't fill the monitor's screen with their displays, no matter how hard you try.

In case you didn't know, the reason for the small borders you mention as being normal with the 1438 is actually due to the Amiga, not the 1438. Compared to a standard PAL video line signal (with which the 1438 monitors are routinely set up) the Amiga's PAL line signal actually contains less picture information and slightly more "blanking" information at either end of the line, hence you see the black borders. I'm not just taking Microvitec's word for this – I've actually seen the way an Amiga video output looks on test gear and it is shorter on picture information than your average video signal.

As for the second part of your question, Microvitec tested one of their own 1438 monitors with their in-house A1200 and couldn't reproduce your problem in any way whatsoever. They tell me that once the monitor's black levels are set and saved, then there will be no difference between the black levels in any of the frequencies which the monitor may run displays at.

They were puzzled by your problem and respectfully suggested that it may possibly be related to the software you are running, or to something which might be adrift in your Amiga itself. If the problem persists, call Microvitec's Technical Support (☎ 01274 390011) – they'd like to get to the bottom of it themselves. **Gary**

Microvitec Boarder problems 2

In February's Amiga Shopper (46) a reference is made on page 21 to a 720 x 560 DBLPAL screen. I assume that the 720 pixel width is achieved by getting rid of the two borders to either side of a normal DBLPAL screen. How is this done?

The largest screen size I can manage is 676 x 560, which usually leaves two black borders on either side of the visible area. Do I need to modify some ToolTypes to get rid of these borders?

Richard Martin
Castle Bromwich, Birmingham

A quick word with Jeff Walker gave me the answer to this – set up the screen size using the overscan screen size adjustments from Workbench's Prefs/ScreenMode program. And if you re-read the mag you'll find it says 720 x 550, not 560.

As for as why the image actually doesn't fill your 1438's screen, see the previous answer. **Gary**

Locale problem

I have an A1200 to which I recently fitted an IDE 80Mb hard drive. Everything has worked fine until a few days ago, when I tried to change the keyboard setting to a British keyboard.

Now every time I boot up I get a system request asking for volume LOCALE. When I

69 click on Cancel, the machine then boots up as per normal.

Kevin Williams
West Midlands

If your Gb keymap couldn't be found, or the keymap wasn't in your dev/keymaps drawer, then I would simply have expected you to get a 'file not found' error message during boot up and this side of things would have nothing to do with the locale settings or files.

Now I might have missed something obvious here, but the logical device name LOCALE: gets assigned to the sys:locale directory during booting and any subsequent changes that you might inadvertently have made, using the locale preferences editor, would only have allowed selections to be made from files that were actually found anyway.

The fact that you are getting a requester for a locale volume tends to suggest that either this assignment is no longer being made, or your locale directory no longer exists.

My current thinking is that you need to take a look at the assignments being made in your start-up sequence! **Paul**

Disk errors

Hardware

When I load my disks my Amiga says that they either have a read error or checksum error. I have left it in twice for repairs, but it still seems to be virused.

I think my Philips monitor is somehow taking the information off my disks. If I were to get an external disk drive would that have any chance of getting virused by my computer?

John Cuddihy
Co Kildare, Ireland

Are we talking about some of your disks, or all of your disks? If these problems seem to involve almost all of your disks, then I'd say it must be a hardware fault – but surely the shop or repair centre that you took your Amiga to would have told you if they had found a drive fault or not.

Now, you might have a virus, but why on earth haven't you been using a virus checker program (you should also always keep your program disks, and any other disks that you don't write information to, write protected – that way they can't be infected with viruses).

Have another talk to the people who repaired your machine and ask them exactly what they found. Also get hold of a virus checker program (such as Virus Checker by John Veldthuis). Having ruled out hardware faults and viruses, you may then need to look carefully both at the quality of the disks you are using and the way you are using, and looking after, your disks in general. I use everything from the very best to the very cheapest disks and, like most users, hardly ever have disk problems (I come across perhaps one or two dodgy disks per year).

What I can say is that in almost all cases I've seen where people have had continual disk error problems it has been either due to a drive hardware fault, or to people continually treating their disks and their drives badly. Pulling disks out when the drive light is on, leaving disks lying around all over the place and so on. Forget about blaming your monitor – it has nothing to do with your problems. Also forget about getting an external drive – that wouldn't help either! **Paul**

A500 CD-ROM

Hardware

Can you tell me whether it is possible to buy a new CD-ROM drive for the A500, if they still make them? And with 1Mb, is it possible to run one? I've been thinking of upgrading to an A1200, but is it worth it?

J. Pollard
Leighton Buzzard, Beds

Presumably you are talking about the A570 offering and the short answer here is that these are no longer made (although they can sometimes be picked up second hand). To be honest, I think you'd be wasting your money continuing along the A500 path anyway.

Under normal circumstances I'd say an A1200 (or perhaps a A4000/030 path if you can afford the extra cash) would be a far better investment anyway and, needless to say, you won't have any problems getting a CD-ROM drive for these machines.

Having said that, I wouldn't buy anything just yet – not, that is, until it has become crystal clear exactly what the new owners of Commodore Amiga have in mind and stocks of the various Amiga bits and pieces have got back to normal. **Paul** ■

Fill in and get answers to your questions — AS48

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☐ A1200 ☐ A1500 ☐ A2000 ☐ A3000
☐ A4000

Approximate age of machine: ______

Kickstart version (displayed at the "insert Workbench" prompt)

☐ 1.2 ☐ 1.3 ☐ 2.x ☐ 3.x

Workbench revision (written on the Workbench disk)

☐ 1.2 ☐ 1.3 ☐ 1.3.2 ☐ 2.04/2.05
☐ 2.1 ☐ 3.0

PCB revision (if known). Do not take your machine apart just to look for this! ______

Total memory fitted (see AVAIL in Shell for Workbench 1.3) ______

Chip memory available (see AVAIL in Shell) ______

Agnus chip (if known) ______

Extra drive #1 (3.5in/5.25in) as DF : Manufacturer ______

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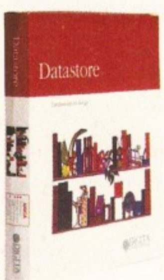
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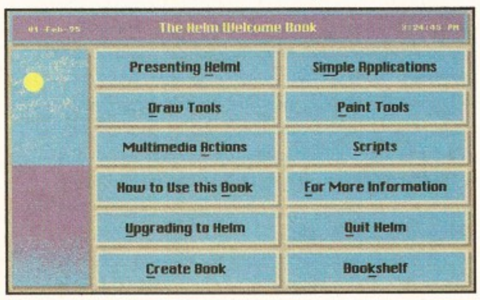
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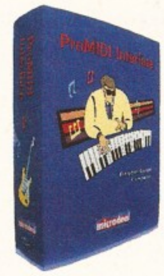
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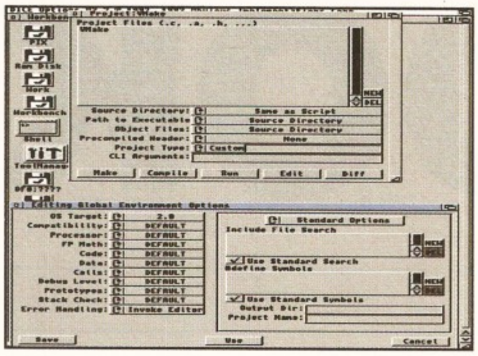
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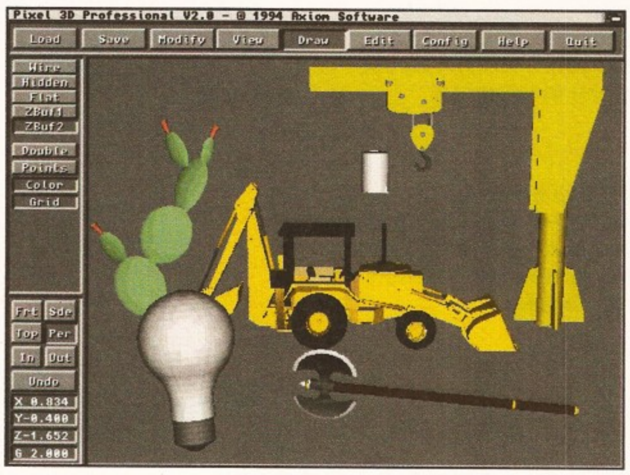


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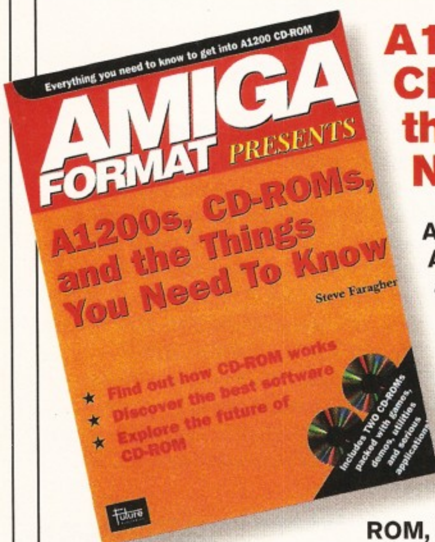
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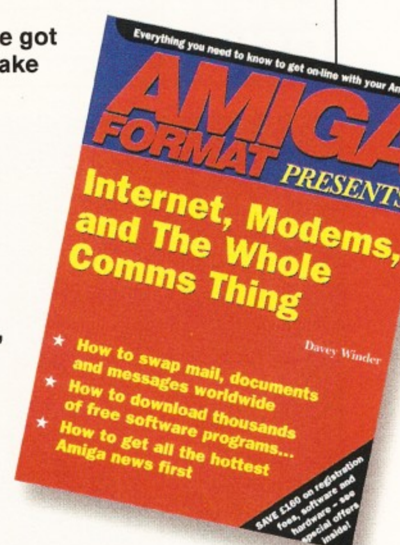
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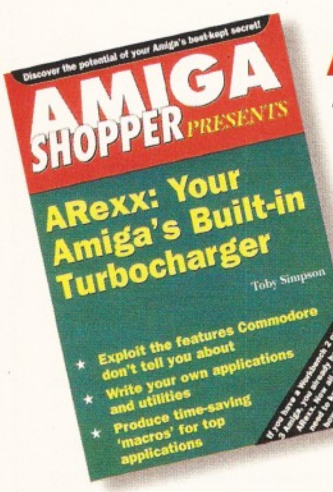
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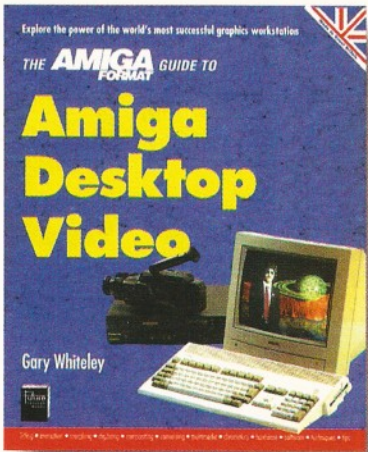
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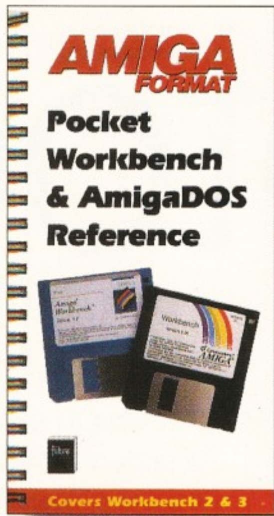
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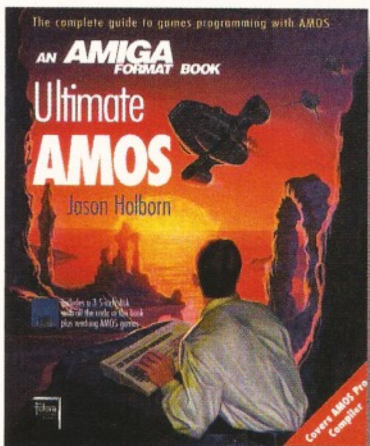
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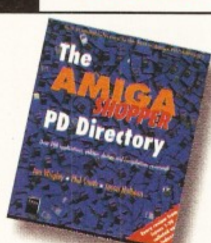
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Photogenics

Welcome to a new tutorial dealing with how to get the best out of Almathera's new image processing package – Photogenics. This month **Graeme Sandiford** *explains the mysteries of alpha channels.*

"I have been **waiting** a long time for a program like Photogenics."

When I first started to work at Future Publishing, it was in the Scanning Department – this gave me the chance to use some powerful software, foremost of these was Adobe Photoshop. This is regarded as one of the most powerful image processing packages on any platform. At this point you are probably wondering what this self-indulgent anecdote is in aid of. Well, it's just that I have been waiting a long time for a program like Photogenics. A program that incorporates some of Photoshop's best features.

It seems that I am not the only person to be impressed with Photogenic's excellent range of features, because there were plenty of people walking around the World of Amiga Show with a copy of Photogenics in their arms. If you are a reader of our sister magazine, Amiga Format, you will also have been treated to a chance to try out Photogenics for free with issue 69's Coverdisk. In view of this excellent product's popularity, we decided to give you a hand in getting the best out of it. However, we expect you to have a rudimentary understanding of how the program works – so get reading your manual or the Amiga Format Coverdisk pages!

Switching channels

The first feature we are going to highlight is one of the most powerful and versatile features of any image processing package – alpha channels. They can be put to all manner of useful tasks, from making composition smoother, adding drop-shadows and generating effects. They are basically images whose greyscale values restrict the application of certain filters. This month we will be dealing with the last use – we will be creating a logo.

The first thing you need to do is create a simple shape – a star-shaped image can be found on this month's Coverdisk 2.

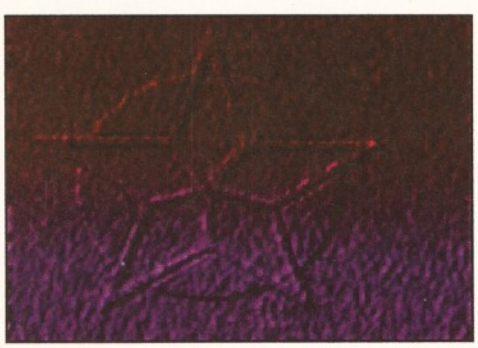
Next, we need to create a hammered-metal texture. We'll do this by using the noise loader as a starting place. Press <right-Amiga><L> and select the white-noise loader. Accept the default image size of 320x256 pixels (we'll use this size throughout) and then apply the sharpen filter on the whole image. Fix the image (you should do this every time you make a change), apply the blur filter to soften it and fix your changes again. This process can be repeated several times.

Next, we'll add some colour – apply the balance filter, using the option button to specify the colour changes.

If you want to take it a step further, then apply the gradient tint afterward. This will give a nice gradual change in colours.

Now we're going to create an embossed effect. Select the star image and apply the embossed filter. Next, move this image to the alpha channel.

The final step is to select the noise image and apply the highlights filter. The filter will automatically use the data in the alpha channel to create a hammered and partially raised surface. ■



We will be creating this image, using Photogenics' alpha channels – a simple, but eye-catching, logo.

On the Coverdisk



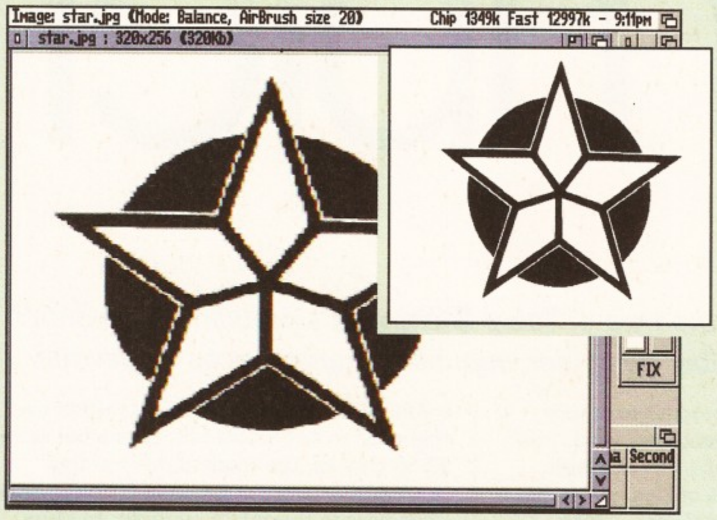
We have included some of the images used to create the logo on Coverdisk 2. This will stop you having to keep too many images in memory, especially if you're using the Coverdisk version of the program. The images are of a low resolution (320x256), so you shouldn't encounter any memory problems.

Five more tutorials

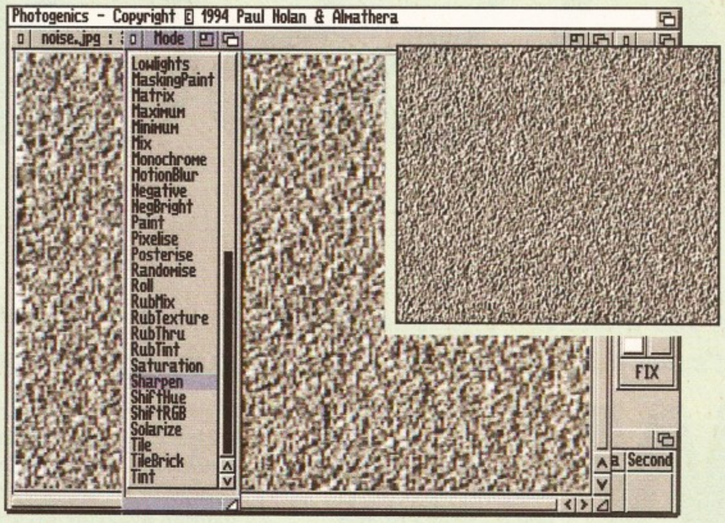
This is just the first of six tutorials that we've planned for you. We will be covering most of the important features of Photogenics. However, some of the techniques that we will discuss in the turorials listed below are equally applicable to other similar packages.

1. **Alpha channels**
2. **Text effects**
3. **Filter effects**
4. **Image composition**
5. **Image retouching**
6. **Drawing techniques**

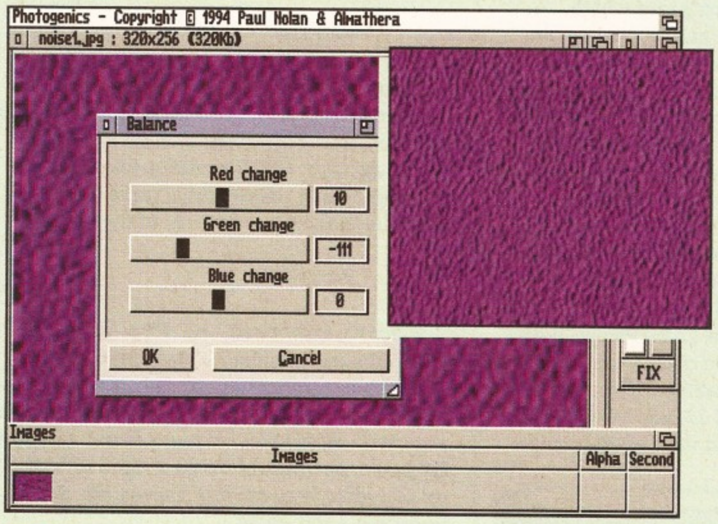
Making your own logo



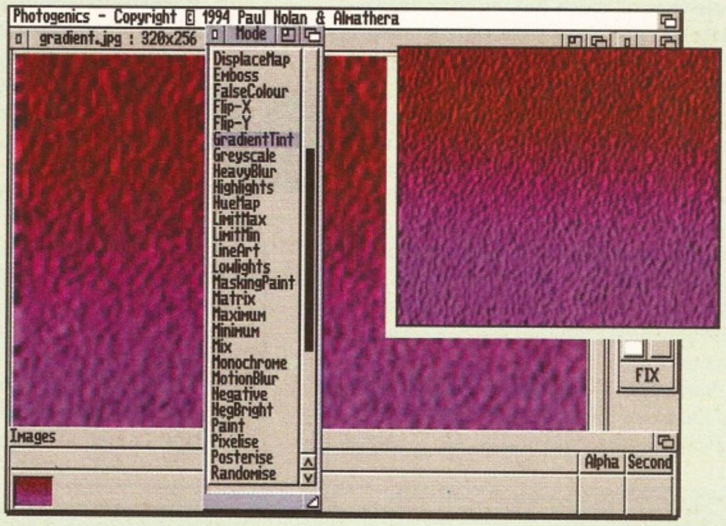
1 ***Create a simple shape that will form the basis for your finished logo. A star-shaped image can be found on this month's Coverdisk 2.***



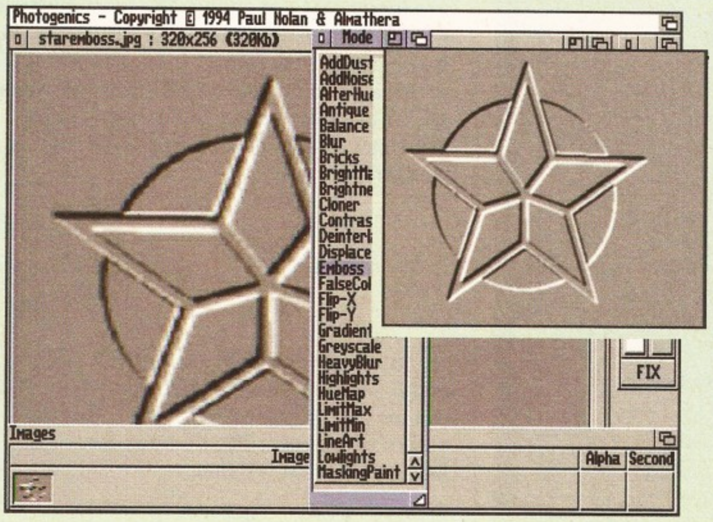
2 ***Press <right-Amiga><L> and select the white-noise loader, apply the sharpen filter on the whole image and then the blur filter.***



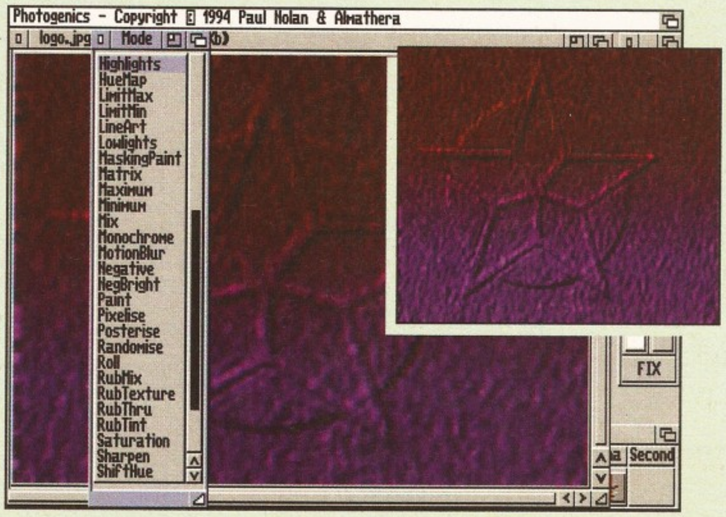
3 ***To add some colour, apply the balance filter (using the option button to specify the colour changes), by changing the RGB values.***



4 ***If you want to take it a step further, then apply the gradient tint afterwards. This will give a nice gradual change in colours.***



5 ***Select the star image and apply the embossed filter. Next, move this image to the alpha channel.***



6 ***Select the noise image and apply the highlights filter. The filter will use the data in the alpha channel to create a raised surface.***

Assembler Part 7

*So, you didn't win a fortune on the National Lottery with the help of **Toby Simpson's** program last month? Let's see if he can upgrade it by making it a random number generator, improving your chances somewhat.*

Well, if you're reading this, then it's very likely that last month's Assembler program failed to win you a fortune on the National Lottery. Since I'm still here, you can also safely assume that I am also not in possession of more money than sense. (Hang on, I've got a fiver here somewhere.)

One of the reasons for this is likely to be that the program was not entirely brilliant in the way it chose its numbers. It would be far better if the numbers were more spread out; if the program could not produce the same number twice; and even more sexy if the results were printed out in numerical order. With this in mind, we're going to tackle the first of these problems with a forage into random numbers and learn some new programming techniques at the same time.

Sadly, there is also no escape from a look into the more boring (but far more useful) subject of logical operations. As we introduced in part 1 of this course, computers are very simple beasts. The microprocessor inside your machine is only capable of a very few basic operations. A whole bunch of these come into a group involving Boolean algebra, which sounds a lot more complicated than it actually is. Let's demonstrate with a useful example.



If you were writing a program which would read in and display an IFF picture file, then you would need to deal with the palette at some point. Every colour entry is stored as three bytes: one byte for the red value, one for green and finally one for blue. It follows that we have a total of a 24-bit value, giving us over 16 million colours.

A lot of 24-bit art packages with 16 million colours possible use 3 bytes for each palette entry. The problem with the Amiga video hardware is that it deals in 12-bit values, 4-bits for red, green and blue. On older ECS Amigas, only 12-bit colour was possible. (If you work this out, 2 to the power of 12, you get 4,096 possible combinations and thus 4,096 possible colours.) On AGA machines, the chipset was improved to deal with 24-bit colour, but as two 12-bit chunks. The result of this was that Assembly language programmers on the Amiga often have to convert 24-bit values to 12-bit values. Let's say that we have our 24-bit palette entry stored in the register D0 in this format...

```
00RrGgBb
```

...where the first byte is blank.

The second stores the single byte red value, the third stores the green and the final byte stores the blue. For your next trick, write a program which converts this value into a 12-bit value in the same register of the format...

```
00000RGB
```

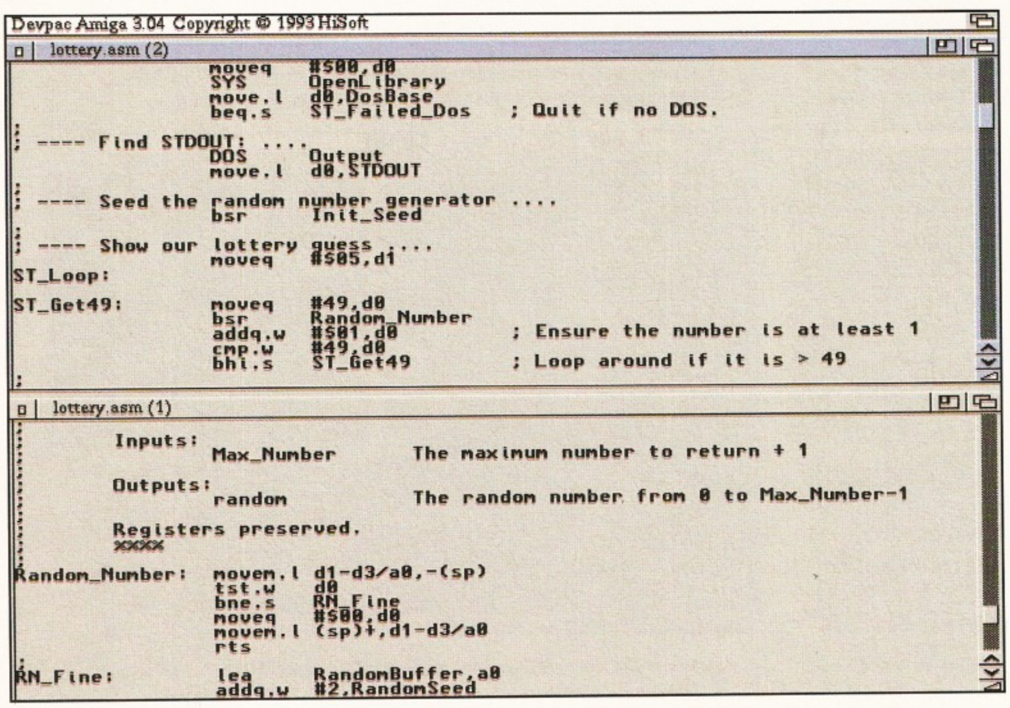
...where we lose the second 4-bits (4-bits is referred to as a nybble) of each colour, which is the least significant part. This is the easiest way of converting 24 to 12-bit colour, but there is a catch. With what we know about Assembly language, how would we go around this? Well, we wouldn't, because it is impossible. So, let's introduce a few tricks.

We'll start with something called "an AND gate". Imagine an electronic component with two inputs and one output. The two inputs are digital, and can either be on, or off. The output is also digital. Assuming 1 is on, and 0 is off, if we fed a 1 and a 1 into an AND gate, we would get a 1 out. Any other combination, and we would get a 0. Let's have a look at this in a small table:

A	B	Q
0	0	0
0	1	0
1	0	0
1	1	1

In the above table (called a truth table), A and B are our inputs and Q is the output. You can see that only if A AND B are 1 does the output become a 1. OK, that was easy – let's have a look at an OR gate:

A	B	Q
0	0	0
0	1	1
1	0	1
1	1	1



Modifying our lottery program to use the new random number generator using DevPac...

In this case, if A OR B are a 1, then the output is a 1. For both AND and OR there is an opposite version, NAND and NOR. NAND stands for NOT AND. In both cases, imagine that the Q output has been inverted. For NAND, this gives us:

A	B	Q
0	0	1
0	1	1
1	0	1
1	1	0

NAND is particularly important, as it is the basic building block of most digital electronic systems. It is unique in that once you have a NAND gate, by wiring them up in different ways, you can construct *every* other basic building block. You can make an AND gate out of two NANDs, for example. A NAND gate can be made out of a transistor and resister, easy things to put on to silicon chips. If you have ever done digital electronics at school, you'll probably know of these gates.

You can buy a particular chip, for example, which contains four NAND gates. Out of two of these, you can construct 1-bit of memory. With four of these 1-bit memory units, you can start to think about constructing a device which adds two binary numbers together and so forth. This is the stuff that microprocessors (and future dreams) are built from.

Back to our 24-bit to 12-bit conversion problem. Assuming you have not fallen asleep, you'll recall that we want to convert this...

```
00RrGgBb
```

to this...

```
00000RGB
```

We're losing a lot of colour accuracy in this conversion, but don't worry about that. Full 24-bit white is FF FF FF, 12-bit white is F F F. Introducing from stage left, the AND gate. For the basic logical operations, such as AND, OR and NOT (inversion), there is a 68000 Assembly language instruction. Our original 24-bit colour value is stored in D0. Have a look at this chunk of code:

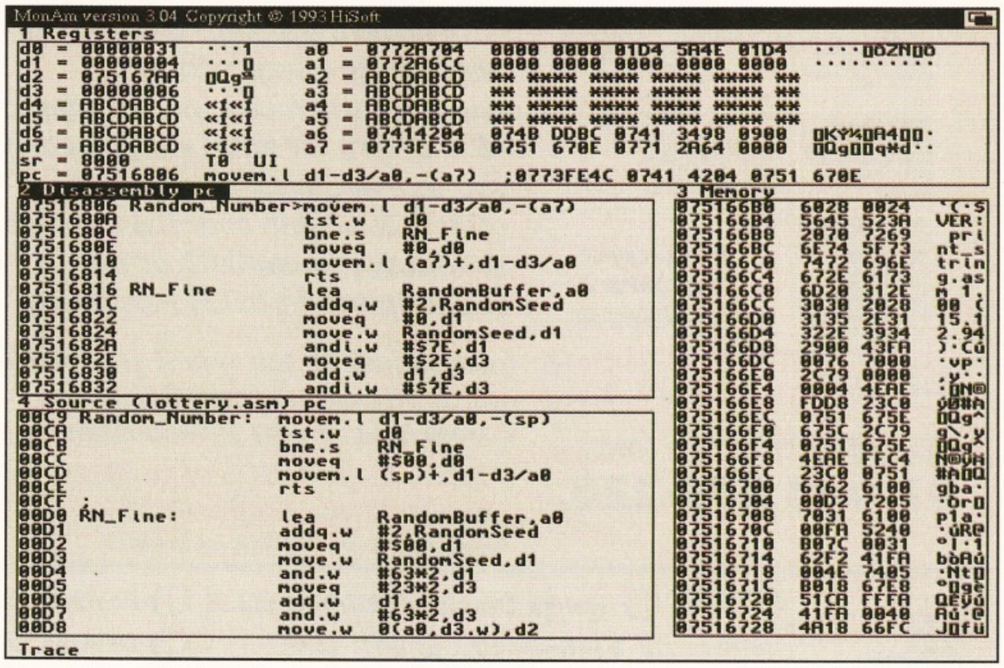
```
move.l    d0,d1
and.l     #$00F00000,d1
```

Firstly, we've made a copy of our full 24-bit value into D1. Then, we have 'ANDed' it with the 32-bit value 00F00000. To avoid confusion, let's write this down in binary:

```
0000 0000 1111 0000 0000 0000 0000 0000
```

I've divided it into nybble (4-bit) chunks. Now, you should remember that with the AND logical operation, you have to provide two 1s to get a 1 out. In the case of our second program line, we are asking the 68000 chip to AND the values 00F00000 with the contents of D1 and place the result in D1.

The 68000 goes through the contents of D1bit-by-bit (in reality, it does the whole lot at once) and 'ANDs' them together. If D0 contained the value for white (255 for red, green and blue), it would look like this in binary:



..and trying to get it to work afterwards with the debugger!

```
0000 0000 1111 1111 1111 1111 1111 1111
```

This value is then 'ANDed' with:

```
0000 0000 1111 0000 0000 0000 0000 0000
```

It should not take a university student to realise that for every time we have a corresponding 1 in both numbers we will get a 1 out. The result will be:

```
0000 0000 1111 0000 0000 0000 0000 0000
```

This is, in fact, the R value out of the colour entry. In programming terms, this sort of operation is often referred to as "masking", or "ANDing out". We have effectively grabbed a specified chunk of data, and discarded the rest. This may not appear stunningly useful at this point, but in a few episodes' time, when we are playing with the AGA chip hardware directly, you may begin to realise just what a concept this actually is.

To summarise this operation into an English sentence: "Wherever there is a 1 in the mask, the corresponding bit from the source value will be carried through". In our example, the MASK is the value 00F00000, and the source is the contents of D1. If the value for R had been 6 rather than F, we would *still* have got the correct value.

If we wanted to show this R value on the screen, using our ShowDecimal5 routine, then we would need to move all of those bits across to the right hand nybble, so that they were a number from 0 to 15, instead of 16 million, or so. 68000 contains a set of instructions for shifting binary patterns left and right, as well as "rotating" them (so the ones that spill off the side come back in on the other side).

To move the nybble we're interested in to the right hand, we need to shift it 20 bits to the right. The catch is that you can only shift, or rotate, 8 bits at a time on the 68000 chip, meaning we need to use these instructions:

```
lsr.l     #$08,d1
lsr.w     #$08,d1
lsr.w     #$04,d1
```

OK, I'll come clean. There is a short-cut. We could *rotate* it to the *left*, in which case we can get away with:

```
rol.l     #$08,d1
rol.l     #$04,d1
```

OK, I'll come cleaner still. There is yet another method, which involves a sneaky new instruction, which I'll slip in at this point, called SWAP. SWAP swaps the right hand 16 bits with the left hand 16 bits. Hence:

```
swap      d1
lsr.w     #$0
```

With a different sequence of shifting and rotating instructions, we could then proceed to extract the R G and B values from the original 24-bit colour entry, into, say, D1, D2, and D3 consecutively. By then simply adding these together, we would get the correct answer. The full program is:

```
        move.l    d0,d1
        and.l     #$00F00000,d1
; AND off the R value
        lsr.l     #$08,d1
        lsr.l     #$04,d1
        ; R now in D1 as 0R00.w
        move.l    d0,d2
        and.l     #$0000F000,d2
; AND off the G value
        lsr.w     #$08,d2
        ; G now in d2 as 00G0.w
        move.l    d0,d3
        and.l     #$000000F0,d3
; AND off the B value
        lsr.b     #$04,d3
        ; B now in D3 as 000B.w
        add.l     d1,d2
        add.l     d2,d3
        ; Add the results to get 0RGB
        move.l    d3,d0
; ... and return result in D0.
```

79 ▶ Note that with the shifting and rotating instructions, you specify whether you wish to work with the long word, or byte value. This means that we could shift the byte part of a data register, without affecting the other 24 bits, for example.

For the perfectionists amongst you, and those who already have some programming experience, you'll easily have spotted different ways to improve and optimise the above code. If you are feeling *particularly* clever, cover your eyes and go off and try to optimise the above down to *four* instructions.

When you give up, check this out:

```
lsr.l     #$04,d0
lsl.b     #$04,d0
lsl.w     #$04,d0
lsr.l     #$08,d0
```

Pretty impressive, eh? It doesn't need any other registers and assembles to a staggering eight bytes and does exactly the same thing. This is one example of where shifting can be useful. There is another, however, which has something to do with the effect that shifting has on a binary value. Let's take the value 32 in binary, which is:

```
00100000
```

Now, we shift this right 1-bit:

```
moveq     #32,d0
lsr.b     #$01,d0
```

The result is 16. Amazingly, shifting a binary pattern right by one divides it by two. Shifting it left will multiply it by two. Shifting right twice divides by four, three times divides by eight, four by 16 and so forth. Indeed, if we have a little look at a binary number with base two column headings, it should be blindingly obvious how this is working:

```
64   32   16   8   4   2   1
0    1    0    0   0   0   0
```

Follow it yourself. Shift that pattern once to the left and the result is 64. It works with *any* number. Shifting allows you to perform certain multiplications and divisions with great speed. The two slowest instructions in the 68000 chipset are the divide and multiply ones. A real multiplication requires a lot of hard work by the processor, shifting is a breeze – particularly in the 68020 and above, where shifts are done very fast indeed. The catch is that you can only divide and multiply by powers of two, but, with computers, you'll find you do that very often.

There is a further catch (oh, why can't things be easy?) and that is the way in which negative numbers are stored inside the 68000. This involves the MSB (Most Significant Bit – the one on the far left) becoming set for a negative number. Shifting will destroy this, and at best will make the result wildly wrong.

They thought of this and, as well as LSL and LSR, there is also an ASL and ASR. These stand for Arithmetic Shift Left and Arithmetic Shift Right respectively. It's time to move on, but before we do, one last set of new instructions:

Tabel 1: truth tabels

AND and NAND

A	B	Q (for AND)	Q (for NAND)
0	0	0	1
0	1	0	1
1	0	0	1
1	1	1	0

OR and NOR

A	B	Q (for OR)	Q (for NOR)
0	0	0	1
0	1	1	0
1	0	1	0
1	1	1	0

EOR (Exclusive OR, often referred to as XOR)

A	B	Q
0	0	0
0	1	1
1	0	1
1	1	0

NOT (Inversion)

A	Q
0	1
1	0

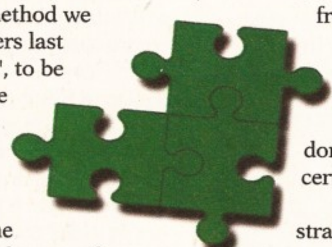
```
not.l             d0
eor.l             #$ffffffff,d0
```

NOT is the simplest of logical operations – it simply inverts each bit in the operand. This can be particularly handy for toggling flags on and off in memory. EOR is "Exclusive OR". EORs are the building blocks of adding machines. The truth table is:

A	B	Q
0	0	0
0	1	1
1	0	1
1	1	0

You can see that it actually adds together A and B. Obviously, it can't add 1 and 1 and give the correct result (10) on one output, so it returns the correct result and leaves it up to other gadgets to sort out the carry. You'll note that if we exclusive OR something with Fs (all 1s), then the result is an exact invert of what it was. So, the two instructions above actually perform exactly the same job!

We're not rich yet, so it's time to return to our lottery program. The method we used to obtain random numbers last month was "less than optimal", to be generous. We were reading the screen position directly from a hardware register and using that as our random value. You probably got a lot of the same numbers back. The solution is to use a proper random number generator. There are literally thousands of pseudo random number generators out there. The reason they are called "pseudo" generators, is because they apply some form of algorithm to a number to get the next random number.



For them to work, they need to be correctly "seeded", by which I mean started off with a number. This is an excellent job for our hardware register. Here is the complete code:

```
IR_M:                  equ       65535
IR_B:                  equ       8821
;
Init_Seed:             movem.l  d0-d1/a0,-(sp)
          moveq        #$00,d0
IS_Re_Do: move.w       $dff006,d0
          ; get random seed
          tst.w        d0
          beq.s        IS_Re_Do
          moveq        #64-1,d1
          lea          RandomBuffer,a0
IS_Loop:  mulu         #IR_B,d0
          addq.w       #1,d0
          divu         #IR_M,d0
          swap         d0
          move.w       d0,(a0)+
          dbra         d1,IS_Loop
          movem.l      (sp)+,d0-d1/a0
          rts
;
Random_Number:         movem.l  d1-d3/a0,-(sp)
          tst.w        d0
          bne.s        RN_Fine
          moveq        #$00,d0
          movem.l      (sp)+,d1-d3/a0
          rts
;
RN_Fine:  lea          RandomBuffer,a0
          addq.w       #2,RandomSeed
          moveq        #$00,d1
          move.w       RandomSeed,d1
          and.w        #63*2,d1
          moveq        #23*2,d3
          add.w        d1,d3
          and.w        #63*2,d3
          move.w       0(a0,d3.w),d2
          moveq        #54*2,d3
          add.w        d1,d3
          and.w        #63*2,d3
          move.w       0(a0,d3.w),d3
          eor.w        d3,d2
          move.w       d2,0(a0,d1.w)
          move.w       d2,d1
          divu.w       d0,d1
          swap         d1
          moveq        #$00,d0
          move.w       d1,d0
          movem.l      (sp)+,d1-d3/a0
          rts
;
RandomBuffer:          dcb.w     64
RandomSeed:            dc.w      0
     ; Random # generator seed/bfr
```

It is dead easy to use. Somewhere near the start of your program, you call "Init_Seed". This will fire up the random number generator with some sensible values. Then, when you want a random number, you simply put the maximum number you want + 1 into D0 and call it "Random_Number".

And, Bob's your uncle, a random number from 0 to D0-1 is returned. If you look at the code, you will notice lots of the new instructions that we have looked at this month – there is nothing in there that you don't already understand now (or so I certainly hope!).

It should be pretty straightforward for you to add this new code into the lottery program yourself, and get the all-new random number system working. Next month, we'll look at making further improvements and sorting algorithms so that we can sort out the lottery numbers a bit. The revised program will be on next month's Coverdisk. Until then, happy programming! ■

Fidonet

– *the* network for the people

Heard of an option to the Internet that is fun, easy to use and... free? **Mat Bettinson** *introduces Fidonet.*

Now the Internet is a household name, it's worth noting that there is also an amateur communications network that's been around for some time, one that is substantially easier to set up and cheaper to gain access to, because, wait for it, it's *free*!

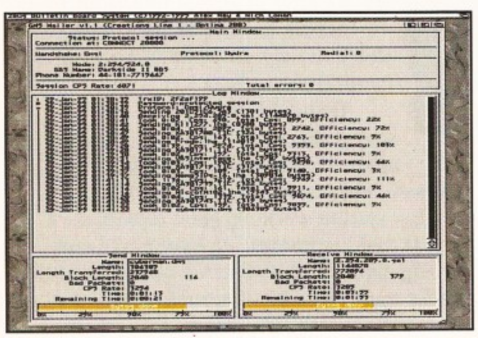
I kid you not, Fidonet is 100 per cent free. In fact, it's so strict about the amateur aspect that charging for access is grounds for a provider to be forcibly removed.

The history and in-depth technical details of Fidonet are beyond the scope of this article. In a way, this is the beauty of Fidonet – you don't actually need to know a great deal about it to get hooked on the most entertaining free past time since... :-). Get used to that group – a colon, a minus sign and a bracket – in the world of computer communications it's called a smiley. Turn your head sideways and look at it. See now?

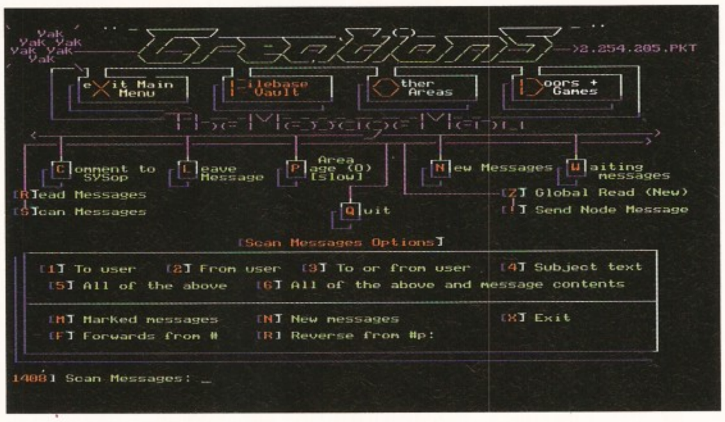
OK, so what is Fidonet? Simply put, it's a group of discussion areas (several hundred) full of messages about the topic that the 'echo' (the message area on the Fidonet) is based on.

When a message is written, it gets added to the other messages and is then spread from the Bulletin Board System (BBS), where it came from, over the phone lines to other BBSs and so on, until everyone connected to the 'echo' has a copy of that message. The mail is generally 'polled' between the BBSs in the early hours of the morning and usually only once per day.

Because of this, it can take a few days for mail to reach one end of the country from the other and even longer for international mail.



GMS Mailer passing mail between two BBSs.



Although the style of this BBS's message menus are completely different, the same options are almost always available.

This delay is affectionately called 'Fido-Lag' and is unavoidable. Fortunately, since people quote the lucky recipient's text when replying to a message, everyone can see what's going on without a photographic memory.

What you need

So, how do you get on to the Fidonet then? All you really need is a modem (see our Supertest of modems on page 26). Any speed will do, though the cost of high-speed modems is so low that you easily recoup the money with a lower telephone bill. Like many in the Comms world, I can't recommend anything less than a 14,400 baud modem – a 2,400 baud unit is pretty much considered the moped of the Comms world.

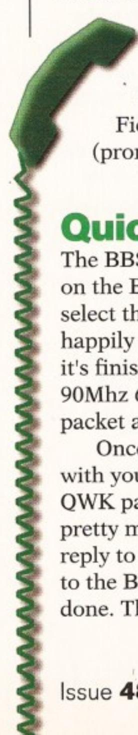
Before leaping into Fidonet, it would make things a bit easier if you were comfortable logging on to BBSs and setting up the 'configs' on your terminal software. A SysOp (a Systems Operator – the person who runs a BBS) may be reluctant to help if you don't present some level of knowledge.

There are three main ways to gain access to Fidonet, each progressively more complex, but with the trade off of being easier on your phone bill. Since we now have our modem and trusty terminal package, the first method is easy to get into and will give a taster of what Fidonet's about before we take the plunge in to the more complex methods.

It's almost certain that a BBS within your local call radius has Fidonet on-line. That means that you can browse through the different echos (the message areas), reading and writing to your heart's content, needing nothing more than your terminal package.

I recommend 'NComm' for the comms rookie. Later you can move on to more complex terminal software. The down-side of this type of access is that you are on the phone all this time and it doesn't take much reading to escalate your phone bill to the national debt of Zimbabwe.

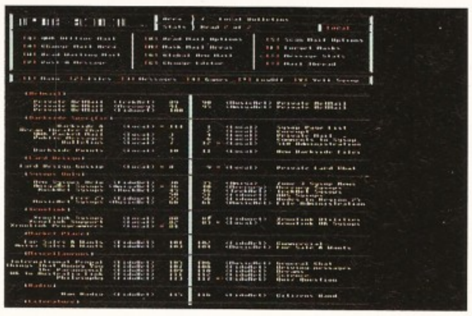
Alternatively, the ideal is to select the echos you enjoy and 'download' them to peruse in the comfort of your armchair over a hot mug of cocoa, rather than nervously glancing at the bill payer every third keystroke. This idea is encompassed in the other two methods of accessing Fidonet, the first being the BBS 'QWK' (pronounced quick) door.



Quick, log on!

The BBS QWK is basically a program running on the BBS you are calling, in which you select the echos you want. It then runs off and happily packs up all the mail for you. When it's finished (why doesn't that SysOp have a 90Mhz 68060?), you can download the QWK packet and log off.

Once you're logged off and have retired with your steaming beverage, you load the QWK packets into an 'off-line reader' (which is pretty much self-explanatory). You read and reply to the mail as you see fit, logging back on to the BBS to upload your replies etc. when done. The advantages are that you don't pay to



The mail menu is the start of a very long list of echos that Darkside BBS carries.

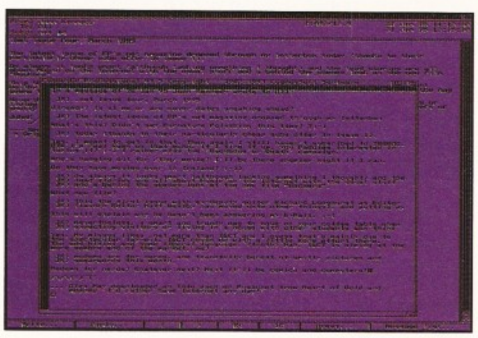
read the messages and can take as long as you like. You can also pick and choose on a daily basis which echos you desire and you don't have to call any particular BBS on a regular basis. These latter points are advantages over the third and most complex of the methods of accessing Fidonet – pointing.

Complex pointing

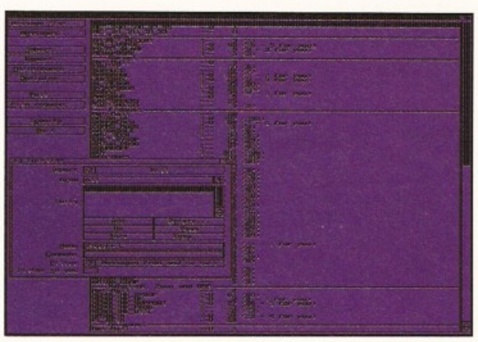
Strangely enough, the term 'pointing' comes from the synonym for the humble full-stop – if you were to 'point', you get your very own Fidonet address which belongs only to you, rather than being just a 'user' of the BBSs' 'node' (a 'node' is a computer that is attached to a network) address as with the former methods we discussed. For example, my address is 2:254/205. The 2 indicates that it's Europe. The 25 in 254 shows that it's in England and the last number is the node number within that 'net'.

Now, a point would have an additional postfix as thus; 2:254/205.7 where this address is point '7' off my BBS. OK, so what other differences are there? The biggest is that you are permanently 'fixed-in' to certain echos, though you may 'fix' in and out. Once you are connected, the BBS will pack all the mail up for you without you even being on-line at all! It just builds up the longer you wait between calls, until the SysOp gets annoyed at his/her hard drive filling up.

So, how do you collect the mail? Well here is another fundamental difference. You don't actually call the BBS at all in person. You get a special program called a 'Mailer' to call the BBS, automatically dropping off your mail and picking up new mail. The whole process still impresses me, but, then, I like the Proclaimers, so I'm easily pleased.



Writing a message in Spot, quoting the previous text and formulating a clever reply over a hot coffee laced with whipped cream and rum.



This list of 'echos' and the twit list of the famous Spot shareware 'pointing' package. The twit feature is most useful for censoring the output from individuals who generate mail you care not to read.

Talk to your modem

Now, this 'Mailer' is similar to a terminal package in that it talks to your modem, dialling out and so on. They differ in that there's special protocols that they share to work out who is what. In fact, what you are running is exactly the same sort of software that the BBSs use to move the mail between themselves. Again, once the mail is magically sitting on your system (a hard drive would be pretty essential, although I have heard of points running on floppy), you use a mail reading and writing program known as a 'Tosser' (!) to do the main business.

'Spot' is the name of the best item of software in this area. In fact it's so good that there's nothing to touch it on the PC either! If you were to get into Fidonet, then it would be a good idea to register the shareware products you would use for this purpose. The good news is that each item, i.e. the Mailer and the Tosser, will only cost you about £20 each and are very good value for money.

Now, so as not to confuse the issue, I've mentioned only 'Fidonet', but I'm really using the term as a *general* statement for the entire group of networks that utilise Fidonet technology. So named because it was pioneered for Fidonet, which is still the largest network and carries the most traffic though with considerably less echos than Mercury & Virtualnet. There are various other networks that can be obtained on many BBSs, like: Mercury, Treknet, Musicnet, Incarnet, Hairnet, Jedinet, the infamous Barnet and, of great interest to Amiga users, the Amiganet.

The beauty of it all

In fact, the beauty of Fidonet is that it doesn't take much to create your own network and if people like what you stand for, the SysOps and BBSs will take it on-board and let it grow.

Barnet is a good example of this process. It began as an echo between two BBSs and is now a very busy small network stretching across the UK, specialising in the Amiga and free-speech. Basically, whatever you want is out there on a network. If it isn't, you make one yourself and it costs a fraction of the cost of pulling in Internet newsgroups.

If you're just interested in Amiga topics, Fidonet alone has a good 20 odd echos, some of them ridiculously busy, including AMIGA_MAGS, AMIGA_UK and WORKBENCH.

Being a Systems Operator (SysOp) is essential for starting your own network, but far easier than you may expect, for the point is to create an echo within a network. That only involves hassling your SysOp to create it and then convincing other SysOps to take a 'feed' off the echo.

Many 'points' have started their own echos that have proved very popular. For instance, an echo based on the TV series, the X-Files, recently started up and is now carrying a huge amount of mail.

The bottom line is...

On-line BBS:

Uppers:
- Very easy.
- Gives a taster of what Fidonet is.
- Needs nothing but a modem and a term package.

Downers:
- You must call the BBS for long periods.
- Very costly for any real amount of activity.

Requirements:
Modem and terminal software.

The QWK door:

Uppers:
- Needs only QWK reader which can be downloaded.
- No commitment. Grab what you want and when you want.

Downers:
- You have to wait for a BBS machine to pack your mail.
- You don't have your own address and you have to log on in person.
- Moderate cost.

Requirements:
Modem, term software and QWK reader. Hard drive recommended.

Pointing:

Uppers:
- Minimum of cost. Can be automated.
- Own address.
- Software is extremely good.
- Have private 'net-mail'.

Downers:
- Can be complex to set up.
- Requires that you apply to the SysOp and commit to being a 'point'.

Requirements:
Modem, point 'Tosser' software (Spot) and Mailer software.
Hard drive is just about essential.

Conclusion

If you're not really sure about all of this, and have a modem, I recommend having a look at the mail facilities on a BBS near you. If you're already frequenting the 'boards' and want to try your hand at QWK or pointing, then have a word with your local SysOp. ■

C coding

The Finder application in our series of C programming tutorials is beginning to become pretty useful. **Toby Simpson** *adds the finishing touches and leaves the rest up to you, the newly examined C programmer.*

As programs go, our Finder application is beginning to become pretty useful. Last month we installed an ARexx interface into it, allowing it to be controlled from other applications for the first time. This has some far-reaching results, one of which is that we can now customise the program without writing another single line of C code should we so wish. This is particularly important for users of the program other than yourself, as they can customise the program also without needing your source code and the DICE C compiler. The moral is "ARexx gives power to the users".

Although the program is now effectively finished, there are still some issues which need to be resolved. They are:

- Better error messages. Throughout the entire program currently, most error messages pop up as a printf() on the Shell window. This is not very tidy for a program which is now GUI, rather than CLI based.
- CTRL-C handling. Users of the Shell may be familiar with the "BREAK" command which allows you to make a program stop running. There is a facility which will allow us to detect when CTRL-Cs are sent to us, and respond accordingly.
- No ARexx examples! It would be nice to test the ARexx facility with some example scripts, to search multiple partitions and other such goodies.

We'll address all of these this month and finish up the Finder application. The first thing we need to look at is an improvement on the error requesters we issue. Currently, if Finder fails to open the gadtools.library, for example, it uses this code:

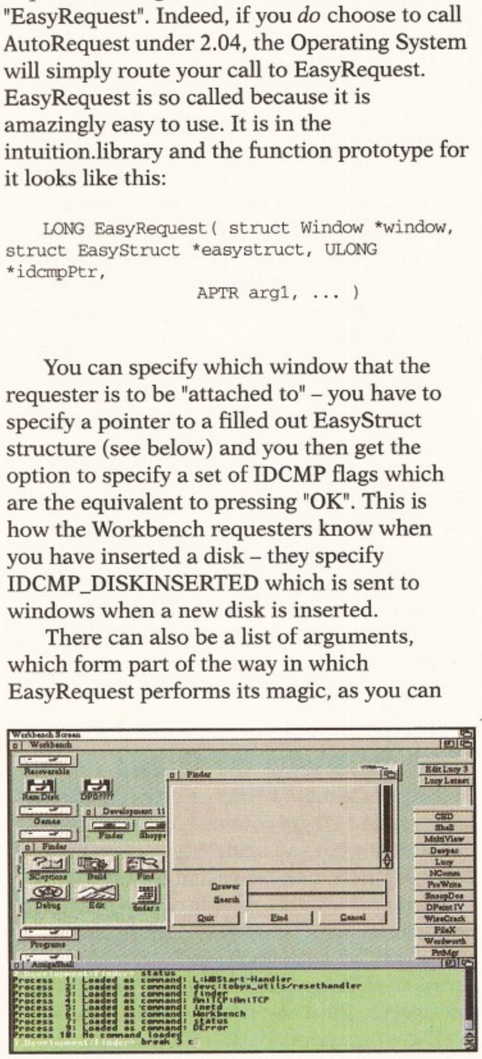
```
    if (!(GadToolsBase =
OpenLibrary("gadtools.library", 37L)))
    {
    printf("Can't open gadtools.library
V37\n");
    cleanexit(RETURN_FAIL);
    }
```

All well and good, but when you are basing your program around a graphical user interface (GUI), you ought, for continuity's sake, deal with errors in the same way. What we need is a small function which will display a proper requester (such as the one which Workbench uses when "no disk is present in DFx") with the appropriate text in it. With Kickstart 1.3, there was a function called AutoRequest which was designed to do just this. When Kickstart 2.04 arrived, they enhanced the system support for such requesters and generated a new function called "EasyRequest". Indeed, if you *do* choose to call AutoRequest under 2.04, the Operating System will simply route your call to EasyRequest. EasyRequest is so called because it is amazingly easy to use. It is in the intuition.library and the function prototype for it looks like this:

```
    LONG EasyRequest( struct Window *window,
struct EasyStruct *easystruct, ULONG
*idcmpPtr,
                      APTR arg1, ... )
```

You can specify which window that the requester is to be "attached to" – you have to specify a pointer to a filled out EasyStruct structure (see below) and you then get the option to specify a set of IDCMP flags which are the equivalent to pressing "OK". This is how the Workbench requesters know when you have inserted a disk – they specify IDCMP_DISKINSERTED which is sent to windows when a new disk is inserted.

There can also be a list of arguments, which form part of the way in which EasyRequest performs its magic, as you can



Testing the CTRL-C breaking. In this example, we run the Finder from the Shell, checked which process number it is, using 'status', and then issued a BREAK command to it.

use 'C' style formatting commands in the requester body text to allow arguments and formatting instructions to be specified. The EasyStruct structure is quite simple:

```
    struct EasyStruct
    {
    ULONG es_StructSize;
    ULONG es_Flags;
    UBYTE *es_Title;
    UBYTE *es_TextFormat;
    UBYTE *es_GadgetFormat;
    };
```

We specify three pointers to character arrays, or strings. One of these is the text to be in the title. If we don't specify this, then the requester window title is inherited from the window specified in the EasyRequest function call. If we also fail to specify a window, then the title will default to "System Request". The other two strings are the actual requester body text (which can include C formatting and argument specifications) and the gadget button information. We can have as many buttons as we like in theory, separated with a '|' in the gadget string. For example, to have four buttons, we could specify this:

```
    "Button1|Another Button|An OK button|And
a CANCEL button!"
```

This can also have C style arguments inserted, such as %s's and %ld's. (Note that since EasyRequest() uses the exec.library RawDoFmt() function for its argument insertion, you cannot use 16-bit variables such as %d's (int's). You have to use %ld to specify a full 32-bit value).

Here's a small function which makes it easy to generate an error requester:

```
**  long  ShowErrorRequester(char *er_text,
**  char *ok_string, BOOL one_button)
**
**  Shows an error requester on the screen.
**   er_text is the text to be shown
**  in the requester, ok_string is the text
**  for the OK button (if any) and
**  if the boolean flag one_button is TRUE,
**  then the requester has a single
**  CANCEL button. Return value is the button
**  number pressed, 0 for CANCEL.
*/
    long  ShowErrorRequester(char *er_text,
char *ok_string, BOOL one_button)
{
    struct        EasyStruct        my_es =
```

```
    {
    sizeof (struct EasyStruct),
    0, "Error",
    "","",
    };
    char  build_buttons[128] = "Cancel";
    /*
    **
```

If required, build the requester buttons with an OK string:

```
    */
    if (!one_button)
    sprintf(build_buttons, "%s|Cancel",
ok_string);
    /*
    **    Set up the easy-request structure:
    */
    my_es.es_GadgetFormat = build_buttons;
    my_es.es_TextFormat      = er_text;
    /*
    **    And put the requester on the
    **    screen:
    */
    return (EasyRequest(NULL, &my_es, NULL,
NULL));
}
```

Type this in at the end of your current source code, and don't forget to add a function prototype for it at the beginning:

```
    long  ShowErrorRequester(char *er_text,
char *ok_string, BOOL one_button)
```

We've simplified it into four basic parameters: the text to put into the requester itself, an optional OK button text and a flag for whether we want that OK button to be used or not. After writing this function, I realised that we didn't need to have the last flag and could have simplified it by specifying NULL for a blank OK string and detecting this from within the ShowErrorRequester call itself. I'll leave you to make the modification!

Now we need to plug it into the main code. Here is the new code which shows an error if a duplicate ARexx port name was detected:

```
    if (!arexx_port)
    {
    ShowErrorRequester(      "Cannot create
ARexx port. An application\n"
    "may already be running with a port
name\n"
    "of 'finder'", NULL, TRUE );
    cleanexit(RETURN_FAIL);
    }
```

It is now simply a matter of replacing all such printf() sequences with new calls to the ShowErrorRequester() function.

Dealing with the CTRL-C BREAK sequence is just as easy. The Amiga Operating System provides a method of detecting such requests through the normal Signal() code. As we mentioned last month, several of your 32 signals are reserved for system use. One of these is SIGBREAKF_CTRL_C. As long as we add this to our signal mask generation, like this...

```
    signal_mask    = arexx_signal +
window_signal + SIGBREAKF_CTRL_C;
```

...then detecting and acting on the request is as easy as adding a few lines of code just after the Wait() call in the event loop handler function called "EventLoop()":

Jargon busting

- **CLI – Command Line Interface. This is a low level interface to the computer. On the Amiga, this takes place through Shell windows. On PCs, this happens through MS-DOS. Macintosh users don't get this flexibility at all without buying, or obtaining, other software (sometimes very expensive indeed).**
- **GUI – Graphic User Interface. This is the visual interface which a computer user interacts with to make things happen. This includes mouse pointers, windows, buttons, and so on. The Amiga's GUI is called Intuition.**
- **IDCMP – Intuition Direct Communication Message Port. This is the port through which Intuition sends messages to applications when events happen – for example, a window is re-sized, or moved.**

```
    /*
    **    Decide on which port triggered the
    **    signal:
    */
    if (signals & SIGBREAKF_CTRL_C)
        {

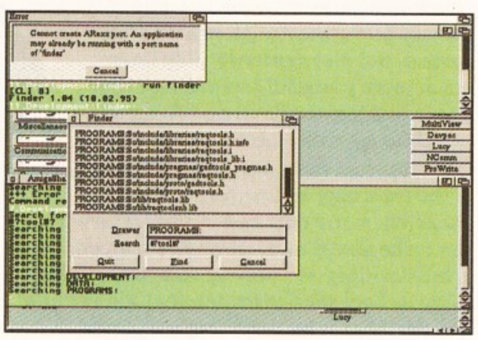
    /*
    **
    **    We have received a BREAK request.
    **            Quit immediately.
    */
        quit_program = TRUE;
        }
```

We can now start Finder from the Shell and also force it to quit. This is sort of equivalent to using the ARexx QUIT command we support – both will cause the program to exit immediately.

One issue we had outstanding from last month was the hard-coded way in which we adjusted the files_matched variable so that the display was correct. If you recall, we used NotifyFind() to show some useful information in the listview and the old code was incorrectly counting these as matched files, making the match count at the end three too large. We countered this by manually subtracting three from the result before displaying it.

This sort of coding is bad, because you may forget you had this rigged and when changing something else inadvertently make this bug re-appear. The suggested solution was to add a new parameter to NotifyFind() for "please count this", or not, as the case might be. The new prototype for the function is now:

```
    BOOL  NotifyFind(char *file, BOOL
log_find)
```



Our new ShowErrorRequester() function in action, showing what happens if you try to run the Finder twice! Also notice the test to the ARexx script.

Instead of just incrementing files_matched now, we use an IF statement to confirm that we want to count it:

```
    if (log_find)  files_matched++;
```

This requires a change every single time we use NotifyFind() to add this new parameter. There is only one case where the log_find parameter is actually TRUE rather than FALSE, and that is when it is called from SearchDir(), where it becomes:

```
    NotifyFind(full_path, TRUE);
```

In all other cases, search through your source code for any other calls to NotifyFind() and add a FALSE parameter to it. Remember also to update the function prototype for NotifyFind() at the start of the source code before trying to re-compile it.

For our final trick, here is a neat ARexx script which works with the Finder to search every partition on your system for a specified file:

```
/*
**  Example program to search all volumes in
**  a system using the C programming course's
**  Finder Application.
**  Latch onto the Finder Application and ask
**  for search string:
*/
ADDRESS "Finder"
    SAY "Search for what?"
PARSE PULL search_string
    SETSEARCH search_string
/*
**  Perform the search:
*/
volumes = SHOWLIST("VOLUMES")
    DO loop = 1 TO WORDS(volumes)
    search_volume = WORD(volumes, loop) ||
":"
/*  Remember to add colon for volume
**  specifier
*/
    SAY "Searching "search_volume
/* Set this draw and perform the search */
    SETDRAWER search_volume
    'FIND'
    END
/* All done, exit:*/
EXIT
```

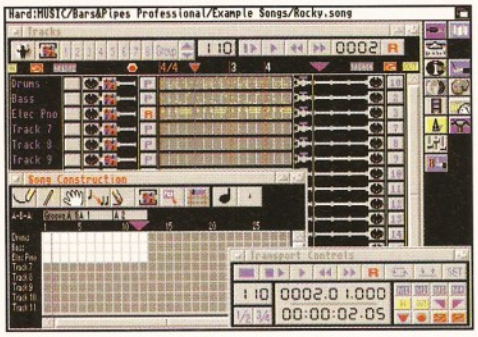
This is without adding any new ARexx commands. One does spring to mind, however, for grabbing search information back from the Finder for alternative formatting by the ARexx program.

That's it! All done. The Finder application is officially finished. Next month, we'll make a start on looking into the DICE programming environment in greater detail, focusing particularly on the new debugging and development tools which made their first appearance with DICE version 3. We're not going to forget our Finder application, though, as it forms a useful test-bed for a number of new things – besides, the GUI looks awful and would benefit from a tidying up.

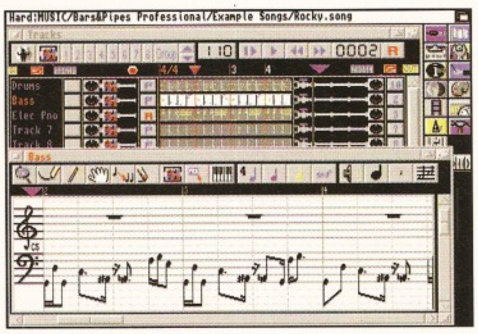
On next month's Coverdisk, we'll include the final Finder program, the complete source code, some examples and an on-line help file. But it's not all DICE, DICE, DICE... we'll chat about documenting programs and show how the on-line help for the Finder was generated using AmigaGuide. Until then! ■

Back to basics

There are countless different ways that your Amiga can aid in the recording and performance of music, but can it actually produce music? **Tim Tucker** *takes a fresh look at the music-making possibilities on the Amiga.*



Bars & Pipes is an extremely well featured Amiga sequencer, if a little on the fussy side...



...being able to edit the music via a score or notation system is a boon for those who read music.

Syncing feelings

One of the great advantages of working with MIDI is that you can synchronise the Amiga with other bits of audio equipment. The top end sequencers on the Amiga (see separate box) all support the industry standard sync code, SMPTE, and all that's required is a small outlay on extra hardware to act as the SMPTE interface, which costs typically about £100.

With SMPTE, all the MIDI tracks that you record on your sequencer can be played along in time with a multi-track tape recorder, which means that you can add "live" tracks such as vocals and guitars to your MIDI music, and mix it all down to DAT or cassette. SMPTE is also the video and television standard sync code, so you can use it to synchronise MIDI music to video presentations, and use the Amiga's built-in sample support to play sound effects and so on. All this makes your Amiga an even more powerful multi-media tool, and you don't have to spend loads of cash to do it.

As we take a few more paces on the road through 1995, it seems a particularly good time to reflect on the entire subject of making music on the Amiga. It's been nigh on eight years since the Amiga first started being produced, and in that time we've seen nine different models, countless third party hardware upgrades, immense amounts of software and a shift from 16-bit to 32-bit computing. Not bad for such a short life-span. But what about music on the Amiga? Have things really changed that much in the audio stakes? To answer that question, let's take an overall look at the way music can be produced on the Amiga.

What are your options?

One of the most startling and worrying statistics that arose out of a recent readers' poll in Amiga Format was how few Amiga users, percentage-wise, were using their Amigas to create music. What made the statistic even more upsetting was the fact that there was a far greater proportion of Amiga users who own and play musical instruments, such as keyboards and guitars.

For some reason, these users have not made the relatively small step of integrating the Amiga with their music-making. If this is because they're still unaware of the possibilities, then hopefully this article will go a little way toward shedding some light on the matter, by showing not only that it's easy to use the Amiga in a musical context, but also demonstrating how much more powerful and exciting your music-making can be when you do so.

Although there are countless different ways that your Amiga can aid in the recording and performance of music, there are only two ways in which it can make actual musical sounds happen. One is by recording and playing sounds digitally, using its own specialised internal sound chip, and the other is by triggering a separate musical instrument, such as a keyboard or drum machine, to make *its* own sounds. Simple. It's even simpler when you realise that in both cases, you don't have to understand too much about the process to start getting results.

Digital recording

Using the Amiga's internal sound capabilities is the easiest way to get started because it needs very little outlay. Above and beyond the Amiga itself, the only other equipment you need is a sampling package, which usually consists of a small piece of hardware that plugs into the parallel port at the back of the Amiga, or the PCMCIA card slot on the 600/1200 models; some software; and something to record sounds off, such as a tape deck, CD player or Walkman. Once you're set up, you play the music from the source, and it is converted into digital information by the Amiga.

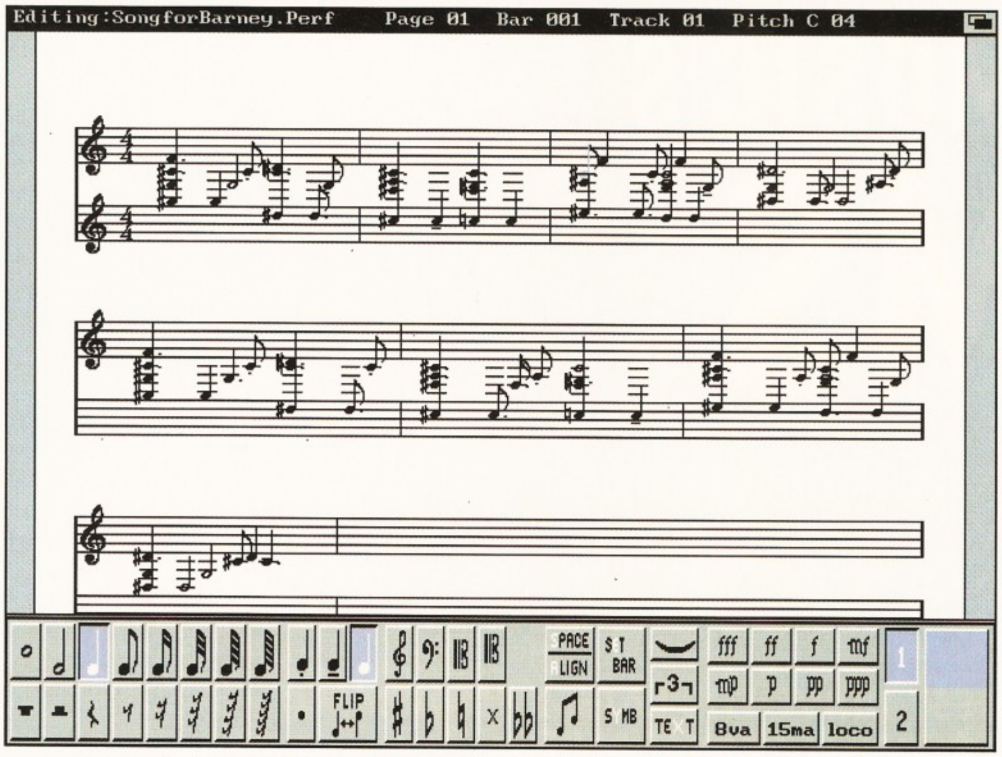
Most software offers many other options, the most useful of which is the ability to vary the sampling rate. The sampling rate is the number of samples that are taken of the source (one sample is actually made up of lots of little samples), and the higher the rate, the better the quality of the overall sample.

It is measured as a frequency, in hertz, and most sampling programs allow sample rates up to 48Khz (48,000 hertz), which is the same as that used in CD recordings. The resulting sample may not necessarily be as high quality as CD, however. It depends whether the Amiga sampling system is 8-bit, 12-bit or 16-bit. The most common is 8-bit, which is also the cheapest, but you can get advanced systems which reach the quality of CD and professional sampling equipment.

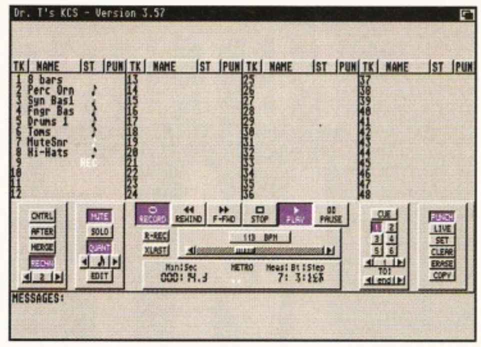


Of course, with higher quality, there are some downsides. If you're sampling at the highest possible rates, then the size of the sample will naturally be that much bigger than a sample at a lower frequency. And don't forget that if you're recording in stereo, which many samplers allow you to do, then you'll actually be taking two samples, one of the left channel and one of the right.

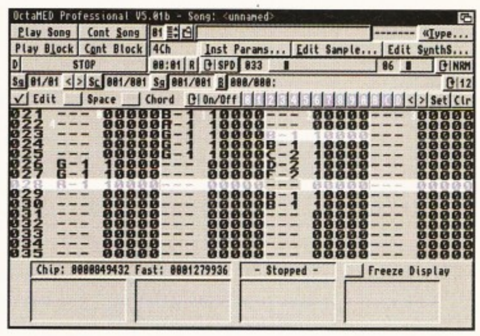
This means that you're going to eat up your hard disk space pretty quickly, or even worse, have a big pile of floppies hanging around. As usual, it's storage space that causes the problems. Once you've recorded the sounds, there are lots of things you can do to them,



Notator-X comes as part of the Music-X 2 package, and it's a very comprehensive score-writing program.



Anyone aiming to make dance music on the Amiga would be well advised to look at Dr T's KCS.



For playing back samples, check out OctaMED.

depending on which software you have and what features it supports. The most obvious advantage is the ability to edit the sound, by chopping off the bits you don't want.

This can be extended to other editing features, like splicing two different samples together, fading the sample in and out, reversing the sample so that it plays backwards, and other standard cut-and-paste operations that can alter the original sound beyond recognition. You can speed up and slow down the playback speed, which is easily done by simply altering the sample rate up or down. The more powerful sampling programs allow you to add certain effects, such as reverb, delay, echo and compression, and alter the tone of the sample to make it softer or harsher.

Once you've edited the sound, most sampling programs enable you to loop the samples – in other words, play the sample from the beginning to the end and then skip immediately back to the beginning again, and so on until you press stop. You can even take little pieces of the sample and loop them.

Alright, so you can record sounds digitally, add all sorts of effects to them, and loop them to your heart's content, but what are you going to do with the result? Well, there are loads of options, and what it ultimately depends on is what kind of sounds you're sampling. For example, you may be familiar with the idea of the "break beat". This is an example of digitally recording a musical phrase, in this case a bar or two of drums or percussion.

By looping the break beat you get a continuous rhythm, which you can use as a backing track, and play other musical instruments along with it. Many hip-hop and house music tracks use this technique to provide that essential beat for dancing to. You can do the same with a bass line, a piano riff, a flute melody or even a vocal phrase.

These are just a few examples of what samples can do to liven up your musical compositions. Another way that samples are often used is to create your own musical instruments. This is where you sample one sound, perhaps a bass note, a blast of a trumpet or even the sound of glass breaking, and use the sound at different pitches to play music with. To make the sound play at different pitches you can either use the built in sequencing functions that some sampling programs supply, or you can use a tracker program, such as the hugely popular OctaMED. A tracker program basically enables you to load in sampled sounds, which you can record in any sampling program, and string them together at different pitches to produce multi-instrumental music.

Most trackers let you play up to four different sounds at a time (this is because there are actually four channels of sound available on the Amiga), although through a bit of trickery, OctaMED can supply eight simultaneous samples (albeit with a noticeable drop in sound quality). Basically, a tracker is like a drum machine, except it uses the internal sound capabilities of the Amiga, and the samples that you record with it. Most trackers cam only cope with 8-bit samples, but already that trend is being changed, with OctaMED promising support of 12-bit sample files in the near future.

Top sequencers

Here are the three best sequencers currently available for the Amiga.

KCS Level 2 v3.57

By: Dr T's
Price: £99
Distributor: Millenium ☎ 01602 552200
Arguably the best and easiest to use sequencer on the Amiga. Especially good for those who want to make dance music, as the loop record function is the best on any sequencer. Also includes automatic MIDI mixing software, a graphic interface and Quick Score notation package. Unbeatable value.

Bars & Pipes Pro v2

By: Blue Ribbon
Price: £300
Distributor: Meridian ☎ 0181 543 3500 and Micro-PACE ☎ 01753 551888
An extremely comprehensive sequencer that has more features than any other music software on the Amiga. Admittedly a little complicated to use, but packed full of features. Especially worthwhile if you plan on using MIDI in a multi-media context, such as with video, Amiga animation and so on.

Music-X v2.0

By: Software Business
Price: £199
Distributor: Software Business ☎ 01480 496497
Nicely laid out sequencer, with excellent graphic editing facilities and a superb built-in notation section with Notator-X. Still unnecessarily fussy at times, but otherwise a good buy.

Sequencing

The ability to string musical events together to create music, as described when talking about tracker programs above, is technically known as sequencing, and this is where we arrive at the second way that the Amiga can produce music. Sequencing is an incredibly powerful application, which is capable of creating some extremely impressive and complex musical arrangements. Where tracker programs fall

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Top Sampling Systems

Technosound Turbo 2

By: New Dimensions
Price: £49.99
Distributor: New Dimensions ☎ 01291 690933
This hardware/software sampling package is a bargain. Although 8-bit sampling is as high as it goes, it's extremely good quality, very easy to use, and features lots of great effects and features.

Aura

By: Audio Visual Research
Price £99.99
Distributor: HiSoft ☎ 01525 718181
Amazing value, this is capable of producing 8-bit and 12-bit sounds. The software is great too, with a phenomenal range of special sound effects. This is only available for 600 and 1200 users.

Studio 16
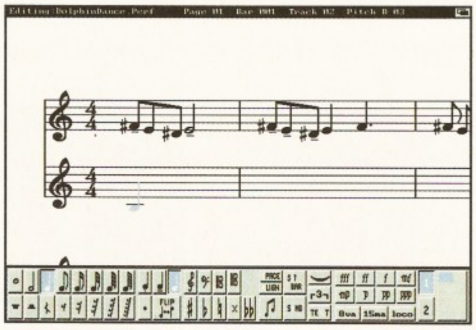
By: Sunrize Industries
Price £1,249
Distributor: White Knight Technologies
☎ 01992 714 539
Full professional package that allows 16-bit multi-timbral sampling. It may be expensive, but this is the best sampling system on the Amiga.

87▶ down is in the quality of the sounds and the amount of polyphony available. 8-bit samples aren't really the state of the art when it comes to sound quality, and even eight notes at a time is short of the mark in professional situations (in a band the pianist alone may well play eight notes at once, let alone the bass, guitar, drums and any other instruments that feature in your arrangement).

Luckily, there are other musical instruments that are capable of producing very high quality sounds; keyboards, synthesisers, sound modules, samplers, drum machines, there's loads of equipment available which can produce better sounds and much higher polyphony than the Amiga. But how can the Amiga communicate with these musical instruments? The answer is through MIDI, or Musical Instrument Digital Interface.

MIDI is a standard in the music industry. It was originally developed to allow sounds on one keyboard synthesiser to be triggered by the keys of a separate keyboard, thus enabling big multi-layered sounds to be created by linking together two or more synths. When a key is struck on one synth, it not only plays its own sound, but also sends a MIDI message down the MIDI lead to any other equipment that it's attached to.

This message carries all the relevant information about the note that was struck – which pitch it was, how hard it was struck, how long the key was held down, and so on. Any instruments on the receiving end of the MIDI message respond by playing the note exactly as the MIDI message specifies. But where does the Amiga come into all this?



Even if you don't read music yourself, it can be useful for passing on print-outs to other musicians.

Well, by linking a keyboard to the Amiga via MIDI, and running a MIDI sequencer program, you can actually record the MIDI events into the Amiga, and then play back the performance. With multi-timbral synths, and other instruments connected to the MIDI system, you can actually create music with up to 32, 64, or even higher polyphony, making fabulous orchestrations possible.

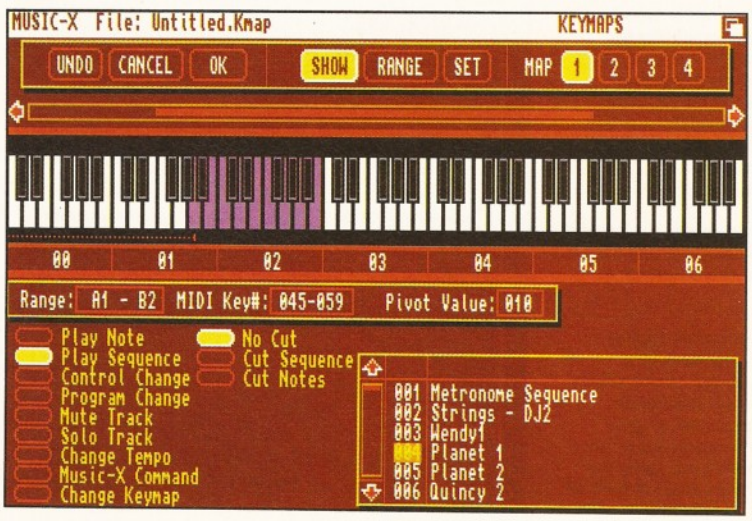
A good sequencer is at the heart of nearly all musical systems on the Amiga, and fortunately there's some extremely high quality software on the market. Like sampling programs, there's a lot more you can do with the music after you've recorded it and, once again, the most powerful of these is editing. You can alter the MIDI parameters of a note event, such as its pitch, volume, timing, duration and velocity. Powerful graphic editing screens allow you to do edits on single notes or whole groups of notes and bars that you select.

All sequencers feature quantisation, and this allows you to record your sounds strictly in time, very useful if you want to produce house, hip hop and computerised dance music. Some sequencers also provide a score writing facility, which automatically converts the music you record into standard musical notation, and the more powerful ones are capable of producing complete orchestral scores, with lyrics, dynamic markings and even chord boxes. You can then print these out and hand them out to other musicians, and with a good printer the results are very professional.

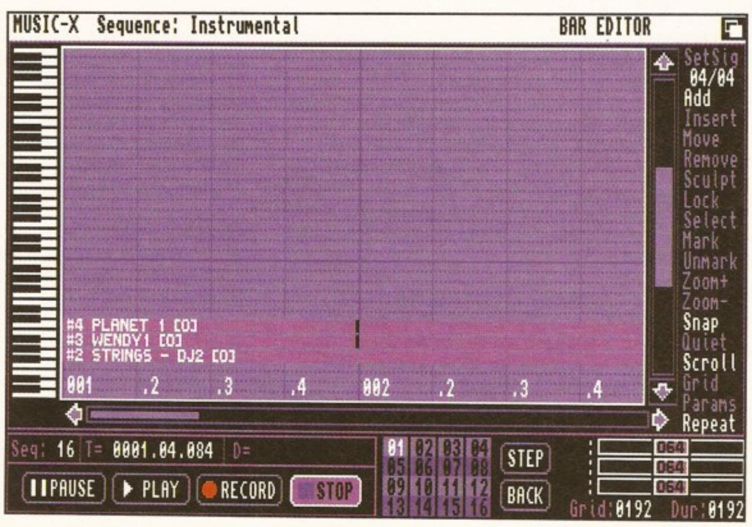
But sequencers don't just record musical notes. All aspects of MIDI can be recorded in a sequencer. That includes the ability to automatically change from one keyboard sound to another with Program Change messages, the recording of pitch bend and modulation wheel information, which add effects to the sound, and dozens of other parameters that allow you to fully automate the recording process.

Many other types of studio equipment are capable of responding to MIDI messages. Effects boxes can be automated from a sequencer, allowing you to change reverb, delay, chorus and all sorts of other effects settings automatically, at exactly the right place in the song. There are even some mixing desks that will respond to MIDI messages, so you can record fader movements and pan sweeps into the sequencer along with all the rest of the music. Once again, you can see how the Amiga becomes the centre of the studio in this situation, as it not only generates music, but also ensures that everything is in time and properly automated together.

The Amiga is a powerful tool in the world of music, and there are many applications on top of the ones mentioned here. Once you start getting involved it doesn't take long to really start tapping the true power of the equipment. So, if you're not already using the Amiga to its full potential, why not get yourself connected? And keep your eye on Amiga Shopper, where we'll be continuing to keep you up to date with music-making on the Amiga. ■



Music-X's Keymap screen allows you to control everything from a MIDI keyboard.



You can arrange whole compositions with Music-X's graphical editing screen.

Public Domain

Jason Holborn *discovers that you don't need to spend a fortune on expensive commercial software to unleash the graphics power of your Amiga – just take a trip to your local PD library.*

Everyone knows that the Amiga's greatest asset is its powerful graphic capabilities – whether you're a desktop daubing Degas or a budding Ron Thornton, the Amiga is the machine to own. What's more, you don't have to spend hundreds of pounds on the likes of DPaint or LightWave to realise your Amiga's graphics power – look deep enough and you'll find a mountain of quality graphics software in the Amiga PD libraries, all of which are available for the price of a disk. Better still, why not follow our guide to graphics PD over the next six pages...

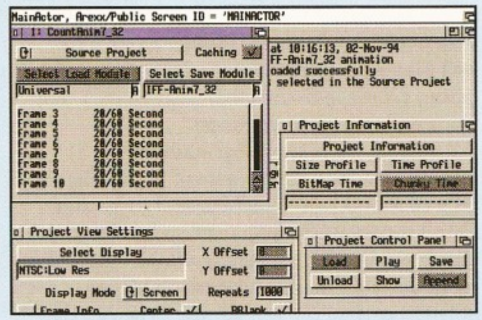
MainActor 1.54

PD Soft V1157

PD animation editors are a little thin on the ground, but that doesn't necessary mean that what's available lacks quality. Take MainActor, for example. MainActor is a powerful animation editor that has recently been released as a commercial program (version 2.0 onwards). When used in conjunction with a paint program, animations can be pulled together from individual frames in no time at all. MainActor provides full animation editing tools and a powerful range of timing functions which let you fine tune the playback of your animation to 1/50th of a second.



Convert images stored in different file formats to raw data for use in your own programs with PicCon.



Create your own animations with nothing more than a paint program and a copy of MainActor.

IFFConvert

Fred Fish 945

If you still use older graphics packages, then you may find that some IFF images refuse to load as the application is unable to handle newer IFF compression techniques. IFFConvert is a handy utility that lets you convert between compression types – it fully supports normal ByteRun1 compression and a new compression routine that compresses IFF images column by column, rather than row by row.

PicCon

Fred Fish 938

Programmers need graphic tools too as PicCon on Fish disk 938 proves. PicCon is a utility that uses Workbench 3.0's DataTypes facility to load any picture file format you have a DataType for (JPEG, PCX etc). Once loaded, you can extract (crop) any part of the image and save it in any DataType-supported format. Ordinary bitplanes, 'blitterplanes', chunky pixels and various sprite formats are all supported. An invaluable tool for C and Assembler programmers.

ConvertHAM

Fish Disk 933

HAM images are fine if you merely want to use them in a slideshow, but they can be a real pain for serious graphics work. The answer, of

PD laid bare

What is PD? PD (short for Public Domain) is a general term that refers to software which is distributed by a PD library, a company set up specifically to handle PD software. Unlike commercial software, no charge is usually made for PD software – instead, you pay a small fee to cover the cost of the disk that the PD library supplies the software on, the cost of postage and a small amount to cover the PD library's costs (duplication, labour and expenses). On the whole, expect to pay no more than £3 per disk (although most libraries charge considerably less).

It's a common misconception that all PD software is free. In fact, very little PD software is technically *completely* free of all copyright. To help you through the PD software jungle, here's a quick rundown of the types of PD software you're likely to encounter.

FreeWare – FreeWare is the only type of PD software that is completely free of all copyright restrictions. Not only can you obtain the software without paying a penny for it, but you can even give copies of it to your friends.

Shareware – The most common form of copyrighted PD software is shareware. Essentially, it should be treated more like commercial software. Although you can obtain a shareware program without paying for it and even copy it for your friends, you're morally obliged to send the author a specified donation should you find the program useful and decide to keep it. Most shareware authors rarely charge more than £10 for their wares.

Licenseware – Licenseware is a more recent type of shareware that takes the responsibility of paying a shareware fee away from the user by including the registration fee into the cost of obtaining the program from a PD library. As a result, it's an offense to copy a licenseware disk for a friend. Licenseware is often cheaper than registering a shareware program – most licenseware disks cost little more than £4.

Giftware – Giftware is like shareware, but instead of sending the authors a donation, you send them a little gift (a box of toffees, a spare mouse, a Lotus Esprit Turbo, etc!).

CharityWare – Pioneered by Amiga Shopper contributor, Mark Smiddy, CharityWare is arguably the best of all PD systems as the author simply requests that you send a donation of whatever size your conscience allows to your favourite charity should you decide to keep the program. The author won't check up on you, but skinflints will probably burn in the eternal fires of Hell. Or something.

course, is to convert your HAM images to 'colour mapped' images – that is, images with 2 to 256 colours.

If you can't quite stretch to the cost of a dedicated commercial image processing utility, ConvertHAM is the next best thing. It translates HAM (and HAM8) images to ordinary 2 to 256 colour ILBM images which can be loaded into any paint program.

ADPro Toolbox

Rob's Hit Stash #11

One of the most powerful graphics programs available for the Amiga has to be ASDG's Art Department Professional (ADPro to its friends). Although ADPro is a wonderful image processing program, its support for batch processing of images is somewhat weak.

With a copy of ADPro Toolbox on your hard disk, however, ADPro is completely transformed. Similar to the commercial package Multiframe, ADPro Toolbox lets you create batch files which can be used to automate every ADPro operation. An invaluable tool for all ADPro users.

BigAnim

Fred Fish 920

Creating animations on your Amiga can be a lot of fun, but there's on big problem – the size of your animations is severely limited by the amount of memory in your Amiga. Not any more, though – enter BigAnim. BigAnim is an animation player capable of 'direct from hard disk' playback of animations complete with user selectable buffer size and playback speed. BigAnim can display IFF ANIM format animations (types 5 and 7) and it makes extensive use of Workbench 3.0's new double buffering support.

ZGif

Fred Fish 907

If you're sourcing pictures from a PC-based Bulletin Board, then you'll find that most images will be stored in GIF format. Short for Graphic Interchange Format, GIF files can easily be translated into IFF using ZGif on



Tired of planet Earth? Create your own demi-paradise with an Amiga and a copy of Scenery (see page 92).

Fred Fish 907. ZGif is a very fast (and very small) GIF viewing utility.

Designed specifically for AGA-based Amigas, ZGif will also work on ECS machines (although only in grey scale).

ViewTek

Fred Fish 903

ViewTek is possibly the most powerful picture/animation viewing utility available for the Amiga. The program happily shows virtually all IFF format images (including 24-bit IFFs), CompuServe GIF format images, JFIF format JPEGs and most ANIM Opt 5 format animations. If you have an AGA-based Amiga, ViewTek happily displays images in 256 colour and HAM8 viewmodes.

ViewTek is one of the most useful PD image tools available. Highly recommended!

S-Utilities

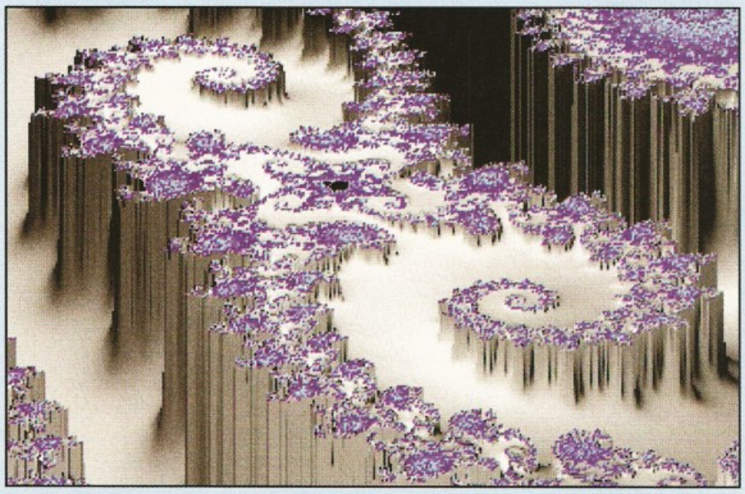
Fred Fish 884

S-Utilities consists of two handy graphic-related tools which should appeal to Amiga graphics fans. First up is S-Pic which converts any IFF image into a stand-alone executable that can be displayed from the Workbench or Shell without the need for a separate picture viewing utility – simply double-click on the picture's icon and its embedded viewer displays the image.

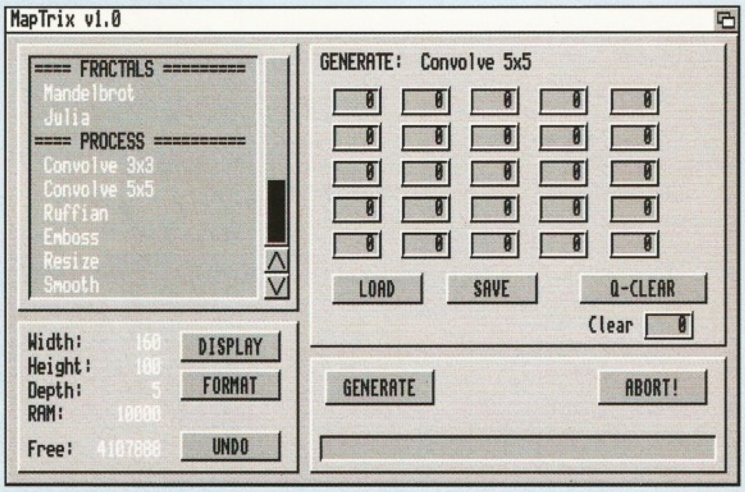
For animation fans, there's also S-Anim which performs the same job on animations. The only restriction is that your animations must be in ANIM 5 format (supported by DPaint and so on).

FUN WITH FRACTALS

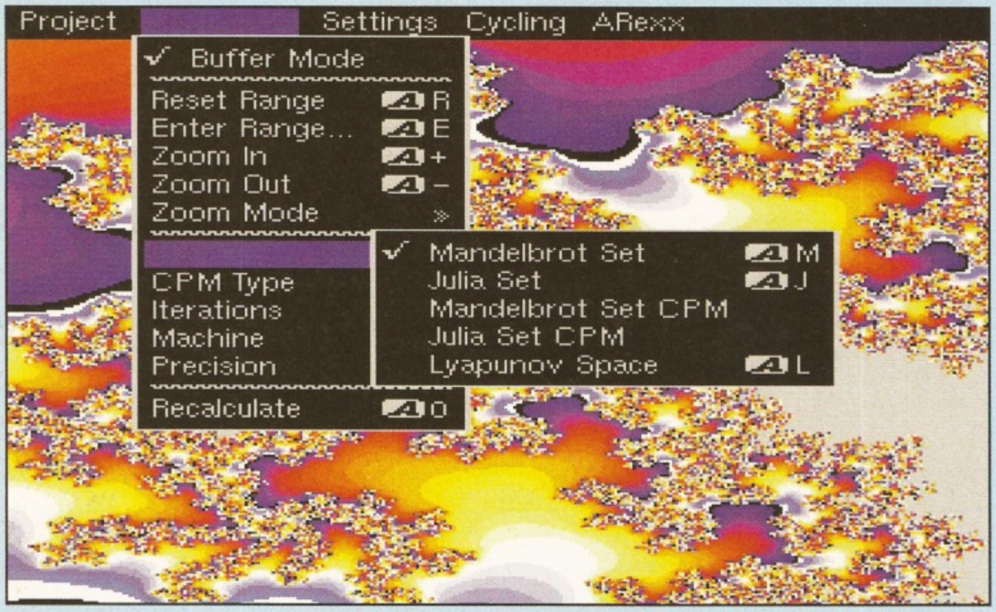
Fractal fans used to be looked upon in the same light as your average train spotter, but not any more – fractals are now *officially* cool. What's more, the range of fractal programs has exploded beyond belief. No longer are you restricted to the more common Mandelbrot and Julia fractals – lurking within the PD libraries you'll find fractal generators that call upon the mathematical wonders of lyapunov space,



Mandel Mountains (page 92) produces some of the most beautiful fractal images you're likely to see on an Amiga screen.



Create impressive brush maps for your ray tracing scenes with MapTrix (page 92) which you will find on Fish disk 853.



Explore the depths of the mandelbrot set in full 256 colour AGA colour with MandelMania.

91 **strange attractors, related abstractions, plasma and other equally mind-boggling tools of the fractal trade.**

MandelMountains

Fred Fish 383

There are plenty of Mandelbrot generators available, but few produce images as breathtaking as MandelMountains on Fish disk 383. Although the program is so old that it doesn't support AGA screen modes (shame), MandelMountains still produces wonderful images that look a bit like snow-covered mountains. The program creates a Mandelbrot image and then uses the colours in that image to produce an elevated view of the fractal. If you intend to buy only one fractal generator, MandelMountains has to be it.

Scenery

Fred Fish 155

Even if you're not a fan of fractal generators, you cannot help but be impressed by the fractal landscapes generated by Scenery on Fish disk 155.

Scenery generates fractal landscapes from a 'seed' value which you can either enter yourself or the program will randomly generate one for you. You're given full control over the height of the landscape (higher values produce more mountainous peaks), sea level, clouds and the lighting direction. The only problem with Scenery is that the NTSC images it produces are not displayed in full PAL resolution. But, Scenery is still the best PD fractal landscape generator available.

Lyapunovia

Fred Fish 877

Lyapunovia is a relatively little known, but mind-boggingly colourful type of fractal image, generated from a mathematical formula known as 'lyapunov space'. Lyapunovia pictures vary from colourful candy, to what the author describes as 'mean metal'. Lyapunovia on Fred Fish 877 provides everything you need to create your own fractal images in full AGA colour. It is an invaluable tool for creating source graphic, textures and backgrounds.

MapTrix

Fred Fish 853

If you're a 3D rendering fan, then you'll already know how useful a paint program can be for creating brush maps. MapTrix is a tool that automatically creates all manner of weird and wonderful brush map images for you. It's uses a powerful texture mapping/backdrop generator that features a large number of fractal generators for mountains, clouds, wave synthesis and 'static' generators. The program also includes some rudimentary image processing tools – convolutions, emboss, ruffian etc – which can be further applied to your brush maps.

MandelMania

Fred Fish 917

The best conventional mandelbrot generator has to be MandelMania on Fish disk 917. Written to fully support the A1200's impressive AGA graphics modes (up to 256 colours on screen!), MandelMania produces striking



Do clouds fascinate you? Do you find cloudless days annoying? Have you ever wanted your own pet Cloud? If so, then you're very strange.

fractal images in a matter of minutes. If you have a machine equipped with a maths co-processor, MandelMania can be set to take advantage of the chip, further increasing the rate at which fractal images are generated. Add to this the program's impressive ARexx implementation and support for Mandelbrot, Julia and Lyapunov space fractals and it's easy to see why MandelMania is the best Amiga mandelbrot program.

Slicer

Fred Fish 836

Fancy trying your hand at a spot of modern art? You need Slicer.

It is a program designed for creating abstract art based on mathematical functions such as mandelbrots, julia sets, related abstractions and chaotic dynamic systems (whatever they are). The pictures that Slicer creates can best be described as cross sections (or 'slices') revealing the inside of solid objects. In all, a weird, but wonderful, tool for unleashing your graphic talents.

Plasma

Fred Fish 779

Plasma effects used to be all the rage amongst demo coders around five years ago. These days, however, the classic plasma effect has found favour amongst graphics fans – even Almathera Systems' Photogenics (see our Photogenics tutorial on page 76) includes a Plasma generator! Plasma, not surprisingly, is a tool that generates plasma 'fields' which can be used in your own graphic creations. Plasma only works on AGA-based Amigas, however, so anyone who does not own either an A1200 or an A4000 need not apply.

LandScape

Fred Fish 554

Fractal programs come in a variety of different flavours, but the most fascinating has to be the fractal landscape generator. One such program is LandScape, a landscape generator written in the humble AMOS language.

The program features many user-adjustable parameters such as the landscape height, sea level, tree and snow levels, beaches, lighting angles and palette. It can generate 2D 'contour maps' and 3D renders in any *one* of five rendering modes which offer varying levels of detail and resolution. At its most detailed, a single scene *does* take time to render – up to 30 minutes on an A500.

Clouds

Fred Fish 893

The award for the most obscure Public Domain graphics tool has to go to Clouds on Fred Fish disk 893. Clouds is a program which generates random cloud scenery (I kid you not). You can save the cloud images as IFF files, which can then be used as Workbench backdrops, backdrops for video and general graphics work, or even brushmaps for rendering. Clouds may not sound like the most 95

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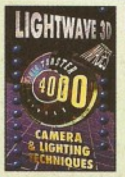
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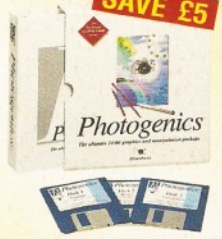
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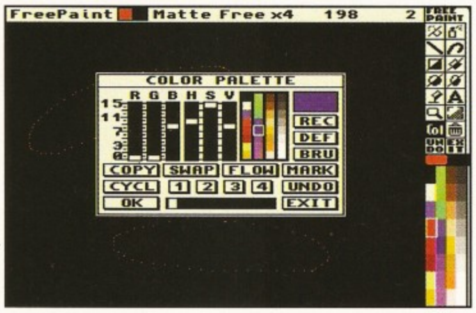
The most popular type of graphics package has to be the paint program. Popularised by the likes of DPaint and Brilliance, the PD libraries offer a selection of quality paint programs which will let you experiment with computer art. Eat your heart out Warhol!

FreePaint
Fred Fish 627

Public Domain paint programs are a little thin on the ground, but the programs that *are* available are generally very good. Take FreePaint, for example. Although it doesn't rival Brilliance or DPaint, it is still a very good paint program that should appeal to younger children. It provides a user interface similar to DPaint and a healthy selection of paint tools, including freehand, curved lines, boxes and so on. Don't expect AGA support, however – 32 colours is as far as FreePaint goes! As a no-nonsense paint program, however, FreePaint is ideal.

Graffiti
Fred Fish 620

Another paint program worth investigating is Graffiti on Fish disk 620. Although not quite as powerful as DPaint, or as accessible as FreePaint, Graffiti offers a number of special features not normally found in PD paint programs. These functions include: autoscrolling support (create



Although it doesn't support the AGA chipset, FreePaint is the best PD paint program available.

massive images), image conversion between screen modes (convert a 32-colour low resolution image to 16-colour high res, for example), a very fast magnify tool and so on. It's unlikely that you'll find the program particularly useful if you already own a commercial paint program, but users on a tight budget may still want to give it a look.

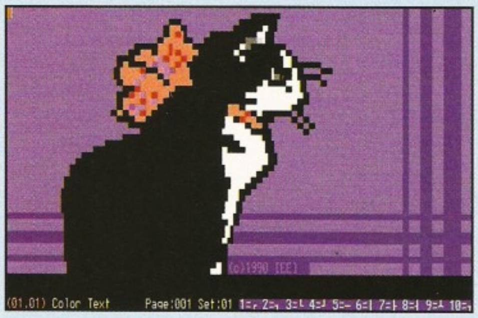
Borealis Junior
Central Licenseware CLE040

Paint programs like DPaint are fine for the computer literate, but younger children can often find them somewhat inaccessible. Borealis Junior, on the other hand, is a paint program designed specifically for younger children. As a result, much effort has been put into the program's user interface to make it as easy to use as possible (although it's arguable whether the author actually achieved this). All the usual paint tools are there, but do bear in mind that this is a paint program for kids, so don't expect to find complex perspective drawing and brush mapping tools! There are, however, a number of unique tools (Rainbow, for example) which are aimed specifically at children.

SpectraPaint
Scanner 3, Disk 2

Written in Europress' AMOS, SpectraPaint is a PD paint program that borrows more than a few tricks from its commercial counterparts. Like DPaint, most of SpectraPaint's painting tools are accessed from a icon-based toolbar that runs horizontally (rather than vertically) along the bottom of the screen.

The program doesn't support either HAM mode or AGA screen modes, but all colour mapped pre-AGA modes are handled well. Pictures can be saved and loaded in IFF format and there's a full selection of brush manipulation and drawing tools to keep the creative juices flowing. SpectraPaint doesn't quite match up to its commercial cousins, but it's more than adequate as a tool for touching up artwork.



Create ANSI artwork with the ease associated with a pixel-based paint program with HyperANSI.

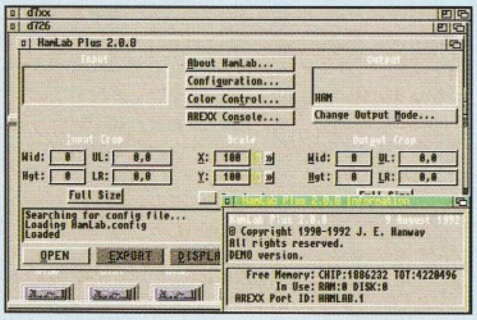
92▶ useful graphics utility available, but it's one of those programs that you really need to use to fully appreciate.

HyperANSI
Fred Fish 851

Falling neatly between Comms and graphics work is HyperANSI on Fred Fish 851. HyperANSI is an 'ANSI' paint program – that is, a paint program designed specifically for creating artwork from the ANSI character set used by Bulletin Boards. BBS SysOps will find this tool invaluable, as it provides all the tools you'd expect from a paint program, making the process of creating your own ANSI artwork that little bit easier.

SIRDS
Fred Fish 763

Unless you've spent the last couple of years mining salt in deepest Siberia, you cannot have helped but notice how popular Stereogram images have become – even Cloanto's Personal Paint includes a stereogram generator! If you can't quite stretch to the cost of Personal Paint, SIRDS on Fish disk 763 is just as good. It can generate and print stereogram images from any standard IFF image.



HAMLab lets you convert more image formats than you can shake a stick at!

HAMLab
Fred Fish 726

It may only be a demonstration version, but HAMLab on Fish disk 726 still provides a number of useful tools. This latest version is essentially a picture format conversion utility that can convert GIF, IFF, JPEG, Targa, BMP, TIFF, PBMPLUS, MTV, Spectrum 512, QRT and Sun raster files into IFF (HAM, colourmapped and halfbrite). HAMLab images can be scaled, dithered, colour corrected and cropped. The only limitation imposed by this demo version is that the program is limited to a maximum image size of 512x512 pixels.

IFSLab
Fred Fish 696

If you thought that a mandelbrot generator produces weird images, then you should take a look at IFSLab on Fish disk 696. IFSLab is an 'iterated function system' fractal generator that apparently focuses on the 'collage theorem'.

It allows you to draw an approximate outline of the planned fractal and then create the fractal directly from actual reduced images of the outline that you manipulate and deform with the mouse. The 'attractors' of the resultant IFS codes can be rendered in black and white or greyscale and then saved on to disk as IFF images. This is definitely one for the hardened fractal fan only.

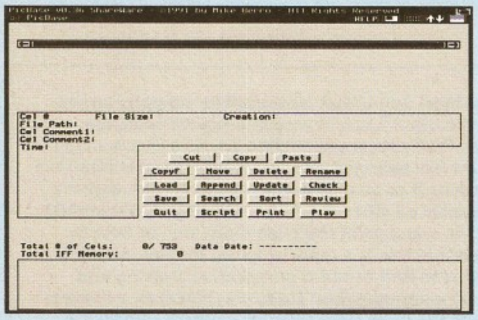
FBM
Fred Fish 678

ADPro it may not be, but you may still want to check out FBM. FBM is an Amiga port of the 'Fuzzy Pixmap' image manipulation library popular on Unix systems. This package allows you to manipulate and convert a variety of colour and black and white image formats.

The program provides support for a number of formats including: Sun Rasterfiles, GIFs, IFFs, PCX, PBM, raw bitmaps, 'Face' files and FBM files. It also has input converters for raw images like DigiView views and output converters for Postscript and Diablo graphics. Besides doing format conversion, the program also provides image processing tools, including: rectangular extraction (cropping), density and contrast changes, rotation, quantisation, halftone greyscale conversion, edge sharpening and histograms.

DrawMap
Fred Fish 639

If you ever need to draw a map of any part of the Earth, then reach for a copy of DrawMap. DrawMap is a powerful graphics tool that ▶9



PicBase lets you keep track of your IFF image files without having to view each individually.

95 generates representations of the Earth's surface. The program uses data from the Micro World Data Bank and lets you select (or de-select) such features as coastlines and rivers. You're also given full control over the level of detail in each map. The program's only major problem is its system requirements – your Amiga must be equipped with at least 1.5Mb of RAM and 1.6Mb of free hard disk space.

PicBase

Fred Fish 527

Keeping track of a large number of IFF image files and brushes can be difficult, so PD author Mike Berro created PicBase, which you'll find on Fish disk 527. PicBase is a sort of mini-database program that lets you organise and manage all your IFF images and brush files.

The program displays a monochrome miniature 'thumbnail' representation of each file, complete with information on that file, such as its full pathname, creation date, file size, image size and depth, display mode and so on. The images are displayed four at a time and can be scrolled in real-time, manually or automatically sorted and even displayed as a slideshow. An indispensable tool for all graphic artists.

PIXEL PUNCHERS SHOOT-OUT!

There are plenty of Public Domain image processing utilities available, but few can claim to *seriously* rival commercial image processing packages such as ImageFX and ADPro. Two programs that can hold their heads up high, however, are Blackboard V3 and ImageStudio, both of which deliver serious image processing power for the price of a disk. Which should you choose? There's only one way to find out...

Blackboard V3

F1 Licenseware

Version 3 of Blackboard is a three disk affair that has undergone some serious debugging since Blackboard V2 was last reviewed in Amiga Shopper. It's no longer freeware either – now living under its licenseware label, you'll have to shell out £5.99 if you want to get your hands on the full version. Thankfully, all the great old features are still there, including morphing (create smooth transitions between one image and another), ADPro-like warping, pixelation, embossing and Blackboard's own unique bulging tool. Although printed documentation isn't included, an AmigaGuide document is provided.

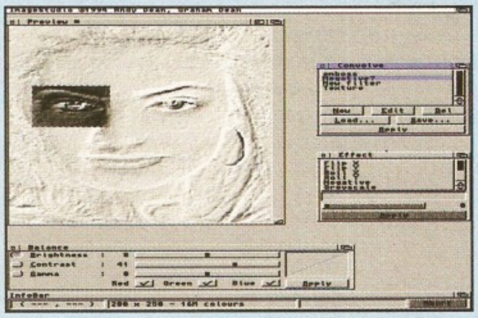
Like ADPro, Blackboard uses a modular design with each feature held on disk as a separate sub program which is pulled in only when it's needed. This approach does have its advantages and disadvantages – the main disadvantage being that, because each 'operator' needs to be loaded into memory before it can be used, the program can slow down a tad. The good news, however, is that Blackboard is less memory-intensive, so you don't need a porky Amiga to get it up and running.

Amongst the new features offered by version 3.0 of Blackboard are 'Land Build' and 'Ripple' operators.

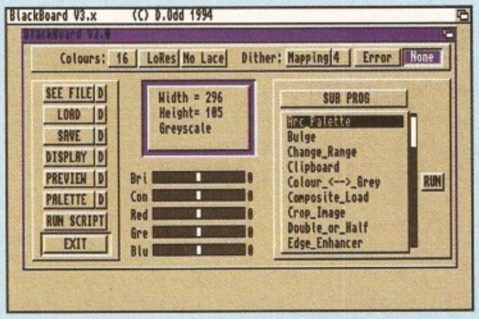
The Ripple operator works in a very similar way to its ADPro namesake – by creating water-like ripples on the 'surface' of an image. Use this feature in combination with Blackboard's extensive ARexx support and it's quite possible to create some fantastic animated ripple effects.

Land Build, on the other hand, is a fractal landscape generator along the same lines as VistaPro and Scenery Animator that creates fantastic fractal landscape images. One of the most powerful aspects of this function is its support for VistaPro .DEM files which can be loaded and utilised within Blackboard.

Blackboard V3.0 shows some real potential, but it is let down terribly by the presence of a large number of bugs. If the author were to iron these out, however, Blackboard V3.0 could eventually become a real threat to commercial image processing packages. If you can live with the bugs, give Blackboard a whirl (or should that be a ripple?).



Modelled heavily on ASDG's ADPro 2.5, ImageStudio shows real promise. Let's just hope that the author continues to develop the program!



Blackboard is the most powerful PD image processing program available, but it's crippled by a large number of bugs.

ImageStudio

17 Bit Software

This young contender certainly looks the business – especially when compared with Blackboard's rather dowdy front end. Judging by the interface, the author has definitely been influenced by ADPro 2.5's new Workbench 2.0-like front end.

Like ADPro, the interface consists of a main preview window (which displays a rendered preview of your bitmap data) and several smaller 'convolution', effect and balance control windows. It also makes extensive use of standard Amiga pull-down menus which allow access to many of the program's functions. In terms of presentation and professionalism alone, ImageStudio leaves Blackboard for dead.

Like Blackboard, the author of ImageStudio isn't going to give his creation away completely free of charge – although the PD version may suit most people's needs, you'll need to send the author £10 if you want the registered (and fully functional) version. The unregistered version offers the same functions of its big brother, but you're limited to a maximum image size of 250x250 pixels. The full version, on the other hand, can handle image sizes up to 32,000x32,000 pixels and – for A1200 owners – the author also includes a special '020+ version of the program.

One of ImageStudio's most impressive tools is its impressive Custom Convolution Editor, which effectively lets you create your own image processing tools simply by editing the values in the convolution matrix. Convolutions take a little time to get used to, but fans of Cloanto's Personal Paint should feel right at home, as both programs share the same image processing technique.

ImageStudio is an impressive program, especially when you consider that this is still only the first version! It's a good solid performer with a healthy selection of image processing tools. Whilst none of them are going to seriously rival ADPro, all the firm favourites are there in force. It still isn't quite as powerful as Blackboard, but at least it's not bugged – if you could combine the power of Blackboard with the ease-of-use of ImageStudio, you'd end up with a seriously impressive PD image processing program.

RENDERING ON A BUDGET

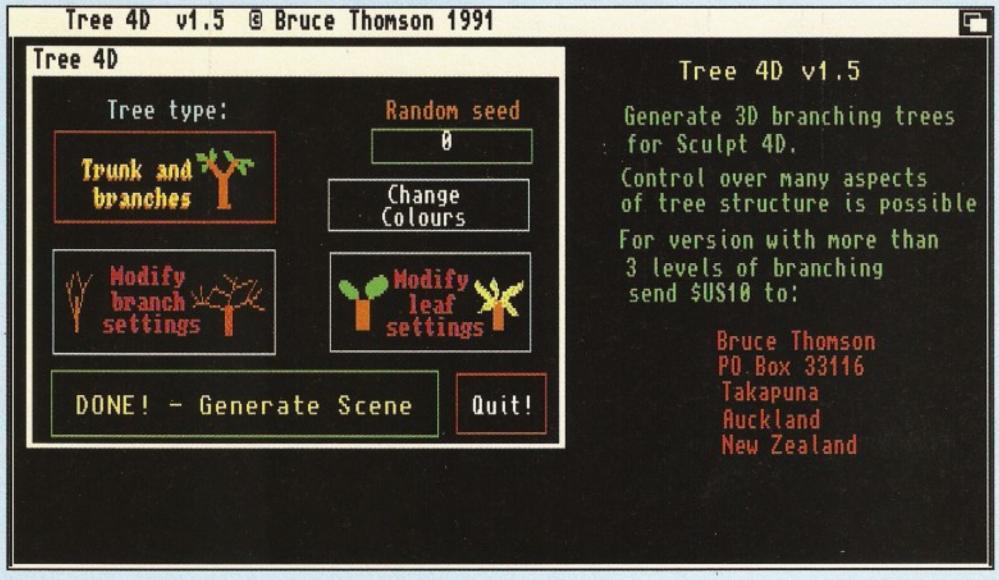
Ray tracing and solid modelling has rapidly established itself as one of the most active areas of Amiga graphics. Ever since Ron Thornton and his extremely talented team of animators amazed the world with the underwater sequences within SeaQuest DSV and his out-of-this-world Babylon 5 space scenes, Amiga ray tracing fans have been heavenly inspired. 99

96 **Here's a quick guide to some of the best solid modelling and ray tracing software the PD libraries have to offer.**

Tree4D

Fred Fish 586

Got a copy of ByteByByte's Sculpt 4D rendering program? Want to create your own 3D trees for that rendered forest scene you've been working on? OK, so maybe not, but if you ever feel the need, Tree4D is for you. Tree4D is a little program that creates fractal 3D trees complete with leaves suitable for Sculpt 4D (or indeed any rendering program when used in conjunction with a object converter like Pixel 3D Pro). The program provides full control over many aspects of your trees, including their shape, level of detail and colour. Fine.



You don't need to wait twenty years to grow a decent tree with a copy of Tree4D!

RayShade

Fred Fish 707

A complete ray tracing package for the price of a disk? You'd better believe it! RayShade is a ray tracing program ported to the Amiga from Unix. The program offers 11 different types of primitives (cubes, spheres, toruses etc), composite objects, a variety of light sources, texturing, bump mapping, antialiasing, linear transformations, rendering of stereo pairs and even full support for animations.

Although RayShade may not be quite as friendly as the likes of LightWave, perseverance definitely reaps rewards as the demonstration images supplied with the package aptly show. A real PD classic.

ISL

Fred Fish 845

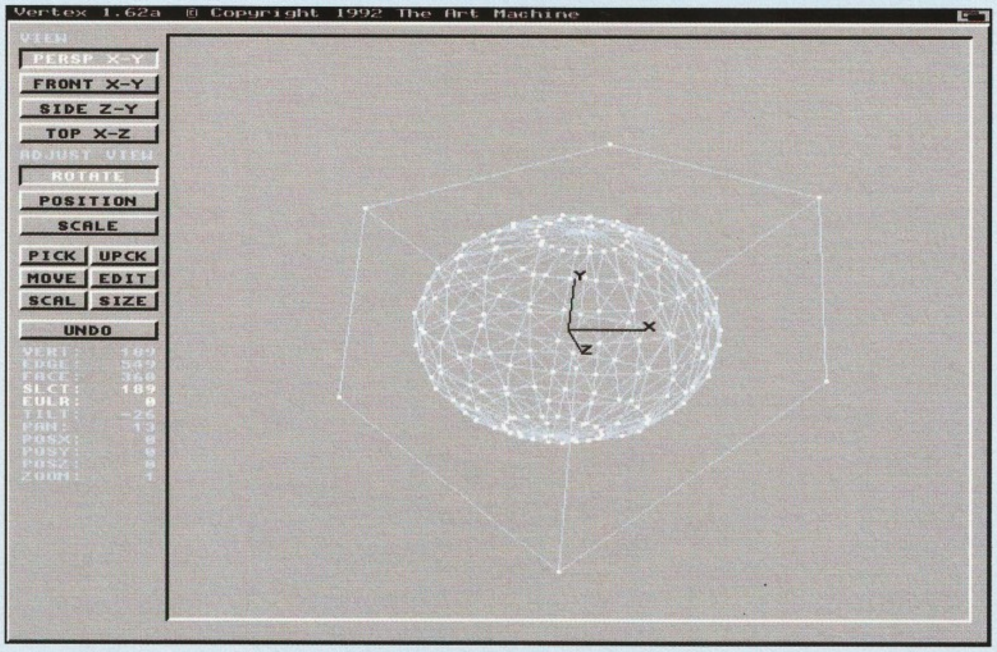
Fans of Impulse's powerful rendering program Imagine may find ISL on Fish disk 845 a useful addition to their software collections. ISL – short for Imagine Staging Language – is a decompiler/compiler which allows you to create and modify Imagine staging files (the files that define where objects are in 3D space) in a manner that provides far more flexibility and the sort of 'nitty gritty' control than that provided by Imagine itself.

DKBTrace

Fred Fish 513/514

It may not be the friendliest program available for the Amiga, but DKBTrace is very, very powerful indeed.

DKBTrace is a two-disk freely distributable ray tracing program that takes a text-based description of your 3D 'scene' and renders it as a 24-bit image file, which can be displayed on a 24-bit card, or converted to a HAM image. The program boasts sophisticated textures, constructive solid geometry and a host of graphic primitives such as quadrics (cones, cylinders and so on), quardrics (doughnuts etc) spheres, planes and triangles. If you can live without the fancy tri-view editor, DKBTrace produces some impressive results.



Vertex is designed as an alternative object modeller for a wide variety of rendering packages.

Contour4D

Fred Fish 586

Contour 4D is a program that creates coloured, altitude-mapped objects suitable for Sculpt 4D. Two IFF brushes are used – one to supply the colour palette for the object and a second which acts as a sort of altitude bump map. To keep the object sizes down, the program automatically optimises your objects so that large areas of one colour and height become a single polygon. The program works perfectly well with colour mapped, HAM and HalfBrite images. 3D fans should give it a try.

Vertex

Fred Fish 727

You may think that the PD libraries would be hard pushed to compete with commercial 3D modelling tools, but that all changed when Alexander Deburie launched his Vertex program. Vertex is a PD object editor which works somewhat differently from commercial offerings. For starters, it allows you to edit and examine objects from any view (including perspective). The view can be rotated, positioned and scaled using the mouse or by entering values. Well worth a look.

Icoons

Fred Fish 775

3D modelling fans should stick Fish disk 775 at the very top of their PD shopping list. Icoons is a spline-based 3D object modelling utility which can be used to generate objects in TTDDD format. TTDDD files can then be converted to a variety of different 3D object formats using the T3DLIB shareware package included. The program offers line and flat mode solid rendering, as well as gourad and phong shading. It does have one major limitation, however – you must have an Amiga equipped with a maths co-processor. ■

PD houses

This is your comprehensive guide to where to go to find the Public Domain program of your dreams.

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A1200 Only PD – BJ Cowdall, 23 Barn Way, Cirencester, Gloucestershire GL7 2LY. Try to obtain all AGA PD and WB3 utils etc. Catalogue is £1 or send a disk and an s.a.e. No phone orders or credit cards. For a printed catalogue just send an s.a.e. Disks are £1 each. Frequent special offers!

Active Software, PO Box 151, Darlington, County Durham DL3 8YT. ☎ & fax 01325 352 260. EMail Bux8@unn.ac.uk. Specialise in professional collections, compile disk packs, essential Aminet compilations and sound samples. Catalogue 50p. No phone orders, credit cards or direct debit. Open 9am – 9pm. Discounts to User Group members.

Activity Software, 393 Doncaster Road, Rotherham, South Yorkshire, S65 2UF. ☎ 01709 377730. Catalogue 1st class stamp. Do not accept phone orders, credit cards or direct debit. Open from 9am – 5.30pm Mon to Sat. Additional info, also stock PC shareware. Crazy Joe's, 141 Effingham Street, Rotherham.

AGA Exchange, 18 Brownshill, Cromer, Norwich, Norfolk, NR27 0QA. specialist areas: AGA PD/shareware full advice service, PD exchanges, Laser printing service. Catalogue free (with s.a.e. + disk). No phone orders, credit cards or direct debit.

AmiCom PD, 22 Church View Close, Havercroft, Wakefield, WF4 2PH. Catalogue 50p. Do not accept phone orders, credit cards or direct debit.

Amiganuts, 3 Spring Road, Bitterne, Southampton, Hampshire, SO19 2BH. Specialist areas: Acc, Accm, Words 4, general software and titles produced by M. Meany. Catalogue, 50p + s.a.e. Do not accept phone orders, credit cards or direct debit. Open 24 hours a day, 7 days a week.

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Belshaw's Computers, 55 Balderton Gate, Newark, Notts. ☎ and Fax 01636 72503. Catalogue FREE. Accept phone orders. Do not accept credit cards or direct debit. Open 9.30am to 5.30pm. Retail outlet, customers can call at shop.

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Dead Budgie PD, 53 East Street, Ashburton, Devon TQ13 7AQ. 70p for two disks. Don't accept phone orders, nor credit cards or direct debit. They accept postal orders or cash – cash is sent at your own risk however.

Deck The Ripper of NFA PD, 173 Trevind Drive, Rushey Mead, Leicester LE4 7TR. ☎ 01162 661 610. NFA productions are setting up a network of PD houses across the UK in an effort to get PD to the public as cheaply as possible.

Epic Marketing, Victoria Centre, 139 Victoria Road, Swindon, Wiltshire, SN2 3BU. ☎ 01793 490988, Fax 01793 514187. Specialists areas, desktop video fonts and tutorials. Catalogue £1. Accept phone orders and credit cards. Open 9.30am – 5.30pm Mon to Sat.

Essex computer systems, Freepost CL2875, Southminster, Essex, CMO 7BR. ☎ 01621 778778. Specialise in Licenceware (central licenceware register C.L.R. organiser). Catalogue FREE. Phone orders accepted. Accept credit cards/direct debit. Open 10am – 6pm Mon to Fri. Members of the professional standards for software distribution.

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Ground Zero, 4 Chandos Road, Redland, Bristol BS6 6PE. ☎ 01179 741 462.

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ICPUG (Independent Commodore Products Users Group), 45 Brookscroft, Lindon Glade, Croydon, CRO 9NA. ☎ 0181/651/5436, Fax 0181/651/3428.

Immediate Arts, 26 Lyndhurst Gardens, Glasgow, G20 6QY. ☎ 0141/946/5798. Catalogue, catalogue disk £1 (p&p inc). Do not accept phone orders, credeit cards or direct debit. Open 9am to 6pm.

JJPD, 48 Bewick Drive, Bakersfield, Nottingham NG3 7GB. ☎ 01159 877 528. Specialise in utilities. Catalogue cost 75p inc. p&p. Open Mon – Sun 9.30 – 4.30. All PD 99p. Hardware also available. Special members discount scheme.

KEW = II Software, P.O. Box No 672, South Croydon, Surrey, CR2 9YS. ☎ 0181/657/1617. Specialist areas: utilities, quality PD & shareware, system functions. Catalogue, introduction pack inc disk £1. Accept phone orders. No credit cards or direct debit. Open from 8am – 8pm. Full disks pick your own files 500 K=Bootable 800 K=Unbootable.

Magnetic Fields shareware and Public Domain Software, PO Box 118, Preston, Lancashire, PR2 2AW. ☎ and Fax 01772 881190. Accept phone orders, credit cards and direct debit. Open 9am to 5pm Mon to Fri. We also do PC + ST.

MegaSoft, 78 Bockingham Green, Basildon, Essex, SS13 1PF. ☎ 01268 559164. For a catalogue, send two blank disks + stamps. Accept phone orders through Megasoft membership codes. Do not accept credit cards or direct debit. Open 9am – 11pm everyday. Over 1500 disks. You name it we stock it, £1.20 per disk.

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Orion PD, Mr Modarne, 14 Ouston Close, Wardley, Gateshead, NE10 8D2. ☎ 0191/438/5021.

Paul Betteridge PD, 25 Cunningham Crescent, Bournemouth, Dorset BH11 8DN. Free catalogue.

Pathfinder PD, 41 Marion Street, Bingley, West Yorkshire, BD16 4NQ. ☎ 01274 565205. Catalogue, Free if a s.a.e. is sent. Do not accept phone orders, credit cards or direct debit. Open 9.30am – 5pm. We have our 6,000 titles in our library and also our PC shareware.

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Pinnacle PD, 134 Buarth-y-Capel, Ynysybwl Pontypridd, Mid Glam, CF37 3PA. ☎ 01443 790996. Catalogue, disk £1 inc p&p.

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The Official AMOS PD Library, 17 Wick Farm Road, St Lawrence Bay, Southminster, Essex, CMO 7PF. ☎ and Fax 01621 778804. Specialist areas: AMOS programs, source-code disks, totally AMOS disk magazine. Catalogue £1 disk s.a.e. for printed info. Do not accept phone orders, credit cards or direct debit. Open, postal only orders, queries during reasonable hours. The only AMOS-only PD library in the UK, with the longest running disk magazine.

Theory PD, PO Box 40, Wallsend, Tyne & Wear, NE28 6YU.

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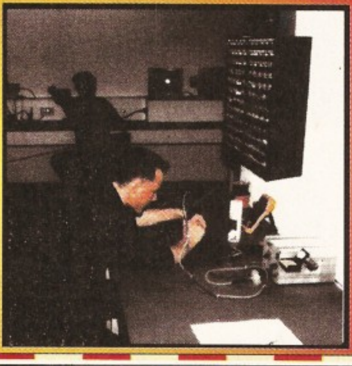
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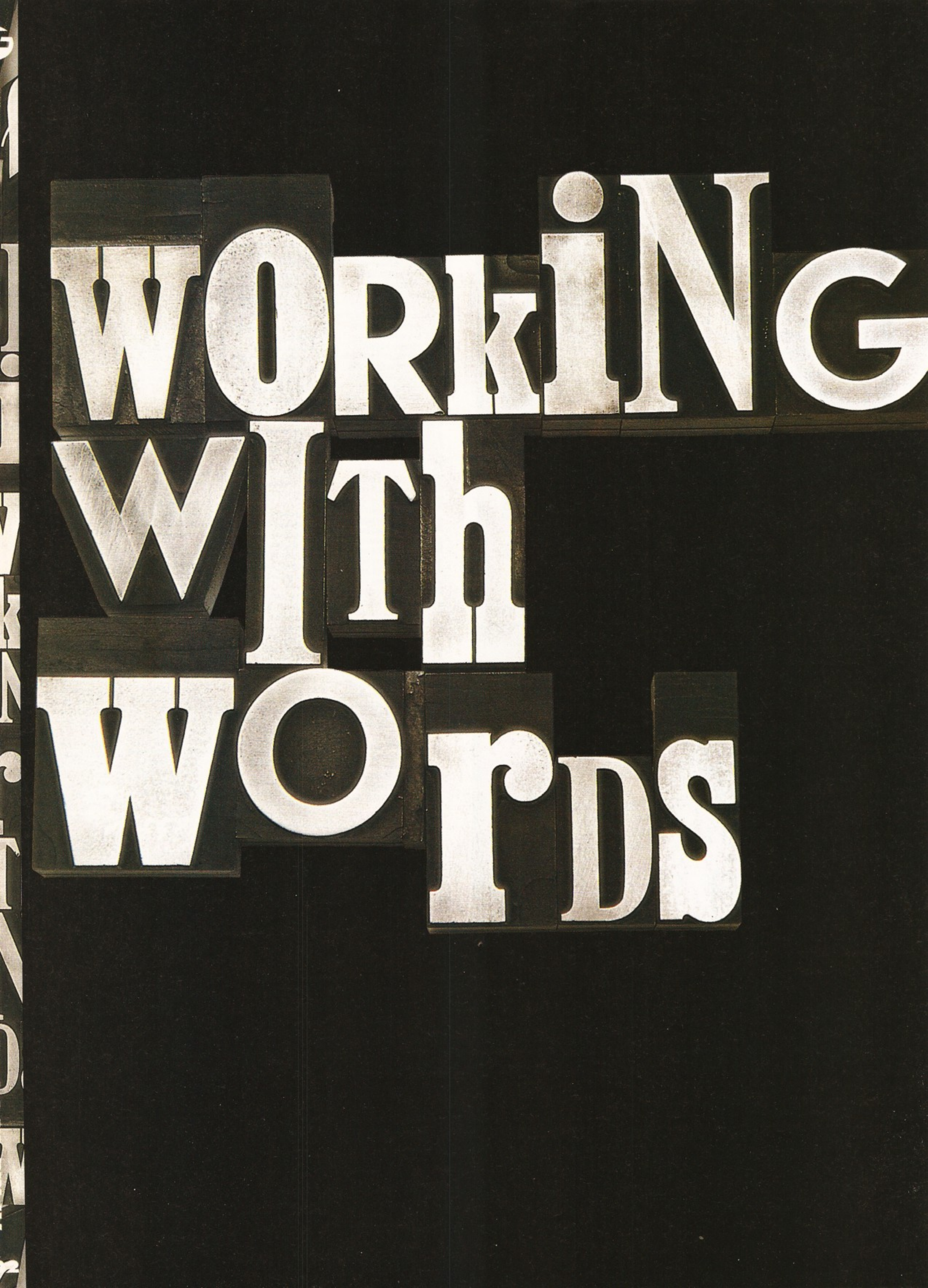
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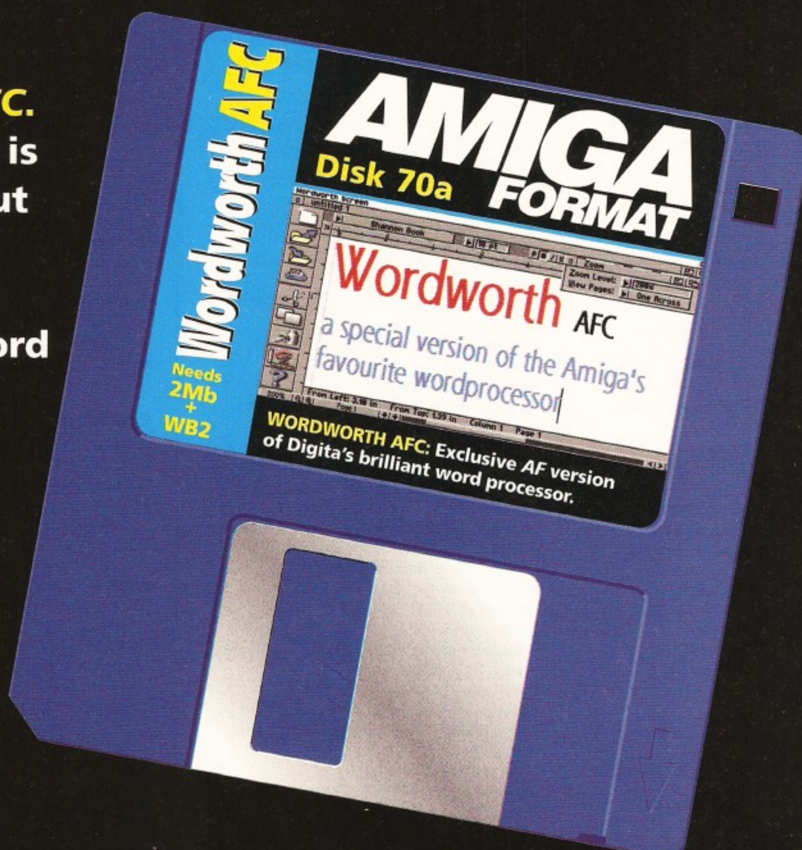
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AMIGA FORMAT

Issue 70 On sale Thursday March 16

User groups

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Contact Peter Duckett ☎ 01932 855834 after 8pm.
Banstead Limited Edition Software.
Contact Les, 28 Congcroft Avenue, Banstead, Surrey SM7 3AE.
Beccles Waveney Amiga (WAM).
Contact Stephen Cockerell ☎ 01502 476 223. 77 Pinewood Gardens, North Cove, Beccles, Suffolk NR34 7PG.
Bedford Nemesis Amiga Group.
Contact Andy Melbourne, ☎ 01234 350654, 126 Mallard Hill, Bedford, MK41 7QT.
Brentwood Hermit Computer Club.
Contact Ann Jones ☎ 01277 218 897. The Hermit, Shenfield Rd., Brentwood, Essex.
Brighton Hanover Computer Club.
Contact Colin Jones ☎ 01273 602834.
Bromley ICPUG South East.
Contact Ian Beard ☎ 01689 830 934.
Bromtard Better Than Life.
Contact Mark Waters, 7 Linton Downs, Brotard, Herefordshire HR7 4QT.
Camberley Camberley User Group.
Contact F Wellbelove ☎ 01252 871545.
Cambridge Cambridge Sixty-Eight Group.
Contact EPL Rowell ☎ 01954 210692.
Chesham Beaconsfield and District CC.
Contact Philip Lishman ☎ 01494 782 298.
Clacton Cheapo PD Club.
Contact Jason Meachen, Ivy Cottage, Chapel Road, Beaumont, Clacton, Essex CO16 0AR.
Crawley Yellow And Blue Room.
Contact Malvin Wall, ☎ 01293 534 139. Camfield, Langley Lane, Ifield, Crawley, West Sussex RH11 0NB.
Coulsdon The Crumblies.
Contact Frank Barron ☎ 0181 668 7695.
Deal Amiga Club.
Contact Wayne or John ☎ 01304 362297 or ☎ 01304 367 992, 27 Mill Hill, Deal, Kent. Meetings at St Johns Ambulance Hall, Mill Hill, Deal.
Enfield Enfield Amiga Club.
Contact Sean Clifton ☎ 0181 8042867.
Folkestone Amiga 101.
Contact D Cryer ☎ 01303 245 378.
Gerrards Cross Chic Computer Club.
Contact Steve Winter ☎ 01753 884473.
Hastings Computer Club.
Contact ☎ 01424 421480.
Horsham Amiga Zone.
Contact Gareth and Raymond, 7 Swindon Road, Horsham, W. Sussex RH12 2HE.
Ipswich Not the Night.
Contact Andrew, 8 Lanark Road, Ipswich IP4 3EH.
Leigh-on-Sea Sensible.
Contact M Street, 158 Hadleigh Road, Leigh-on-Sea, Essex SS9 2LP.
Leigh-on-Sea The Swop Shop Club.
Contact Ian Prentice ☎ 01702 710267.
London (Woolwich) Inspira Software Club.
Contact David Cowell ☎ 0181 473 4426, 45 sandy Hill Rd., Woolwich, London SE18 7BQ.
London (East Ham) Amigaholics Club.
Contact Kevin Bryan ☎ 0171-580 2000 Ext 240.
London (Hampstead Garden) Amiga Club.
Contact Imp ☎ 0181 455 1626.
London (Winchmore Hill) Access Information Technology.
Contact Darren ☎ 01956 229729.
London PD for beginners.
Contact M. Macias ☎ 0171/924/5528 before 6pm. 14 Totteridge House, 15 Yelverton Road, London SW11 3QQ.
London Twilight.
Contact 13 Mavis Court, Ravens Close, London NW9 5BH.
Luton Plague Amiga Users Group.
Contact Russel Lewis ☎ 01582 484 514. 44 Moreton Rd. North, Luton LU2 9DP.
Luton Amiga Users Group.
Contact Dave ☎ 01582 481952.
Mundesley APDEG (Amiga Public Domain Exchange Group).
Contact Richard Brown ☎ 01263 720868.
Norwich AGA Exchange.
Contact K. Phillips, 18 Brownshill, Cromer, Norwich NR27 0QA.
Norwich Magic Windows.
Contact Frame, 26 St Benets Road, Stalham, Norwich NR12 9DN.
Rye Rye Amiga Group.
Contact Oliver Campion ☎ 01797 222876.
Sittingbourne Sittingbourne Co-op Amiga Club.
Contact Andy ☎ 01795 842 608. The Bungalow, Keycol Hill, Newington, Sittingbourne, Kent ME9 8NA. Postal memberships offered. Support BBS ☎ 0181 905 7002 (data).
Southend-on-Sea Southend Team.
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Sutton Agnus.
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Contact Jim & Wayne ☎ 01304 380670 + 01304 362297, 100 Stockdale Gardens, Deal, Kent CF14 9BN.
Thetford Bizart Diskmag.
Contact Stephen Marghan, Timberton House, The Mount, Buckenham Tofts, Thetford IP26 5HP.
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Contact Imran Ahmad ☎ 0181 689 9102.
Watford Hertfordshire Amiga Users Group.
Contact Keith Alexander ☎ 0181 421 1784.
West Watford AmigaSoc.
Contact Neil Cartwright ☎ 01923 248483.
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Contact Gary Bowen ☎ 01276 479615, 11 Hutton Close, Thorn-down Lane, Windlesham, Surrey GU20 6DN.
Witham Amiga Witham Users Group.
Contact K. Anderson ☎ 01376 518271.
Worthing Imagine, LightWave, Real 3D objects.
Contact Michael Moorfield, 4 St Botolphs Crt, St Botolphs Rd, Worthing, West Sussex BN11 4JH.
Yarmouth Robotronix Amiga Club.
Contact P. Symonds ☎ 01493 667161

Southwest

Bodmin Amiga Users Klub (Bodmin).
Contact Jack Talling, 1 Windsor House, 19 Castle St, Bodmin, Cornwall PL31 2DX.
Bournemouth Amiga Club.
Contact P Chamberlain ☎ 01202 296714.
Bristol Avon Micro Computer Club.
Contact Roger or Bob ☎ or fax 01179 311642.
Bristol Bristol Amiga Club.
Contact 3 Parkstone Avenue, Horfield, Bristol BS7 0BX.
Bristol EmuSoft.
Contact Nalpex, 48 Longhandstones, Cadbury Heath, Bristol BS15 5AP.
Dukinfield C. C. Swapshop.
Contact Tom Hampson ☎ 0161 339 9488.
Exeter Exeter 16-bit User Group.
Contact Andrew Deeley/Phil Treby at 25A Gloucestershire Rd, Exwick, Exeter EX4 2EF.
Reading Charlies PD.
Contact Charles Read, 10 The Cedars, Tilehurst, Reading, Berks RG3 6JW.
Salisbury CHUD.
Contact Mr M Sellars ☎ 01980 33154.
Taunton Imagine Object Makers.
Contact Charles Mo, 16 Calder Crescent, Taunton, Somerset TA1 2NH.
Torquay Ami-Info.
Contact Paul Caparn, Homeside, Higher Warberry Road, Torquay, Devon TQ1 1SF.

Midlands

Birmingham 68000 in Birmingham.
Contact Mike Bedford-White, 16 Westfield Rd., Acocks Green, Birmingham B27 7TL.
Birmingham Software Exchange Service.
Contact Michael Pun ☎ 0121 459 7576.
Coventry Coventry and Warks Commodore Computer Club.
Contact Will Light ☎ 01203 413511.
Derby Living Poets Society. Publication and appraisal of creative writing.
Contact Sean Woodward. Fido 2:2503/104; 11 Menin Road, Allestree, Derby DE22 ZNL.
Hereford Hereford Amiga Group Help.
Contact John Macdonald ☎ 01981 21414.
Leicester NFA.
Contact Deck Goodwin ☎ 01162 661 610. PO Box 323, Cambell St. Leicester, or 173 Trevind Drive, Rushey Mead, Leicester.
Loughborough Leicestershire Amiga Users,
Contact Daz or Eddy ☎ 01162 375 147 or 01509 267 198. PO Box 10, Mountsorrel, Loughborough, Leicestershire LE12 7ZZ.
Loughborough BR & CJ Computer Club.
Contact B Robinson ☎ 01392 72889 or ☎ 013922 841296.
Melton Mowbray Melton Amiga Users.
Contact Stephen Mowbray ☎ 01664 63421.
Nottingham Robin Hood Amiga Users.
Contact Kristian Denman ☎ 01777 838 248. 2 Beech Walk, Elkesley, Nr Retford, Notts DN22 8BB.
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Solihull Sid The Kid Amiga.
Contact Sid Reeves ☎ 0121 705 8619.
Solihull Solihull Computer Users Group.
Contact Rich or Lee, 41 Leafield Road, Solihull, W. Midlands B92 8NZ.
Stoke-on-Trent The Amiga Studio.
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Stoke-on-Trent ANDY PD.
Contact Andrew Shufflebotham ☎ 01782 775014, 2 Sussex Drive, Kidsgrove, Stoke on Trent, Staffs ST7 1HG.
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Contact Den Rounding, 8 Primrose Lane, Miami Beach, Trusthorpe Road, Sutton-on-Sea, Lincolnshire LN12 2JZ.
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Witney Cacophony (Unlimited).
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Contact Mike, 26 Doren Avenue, Rhyl, Clwyd LU8 4LE. ☎ 01745 343044.
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Bathgate Lothian Amiga Users Group.
Contact Andrew Mackie, 52 Birniehill Ave, Bathgate, W Lothian EH48 2RR.
Cowdenbreath Amiga FX.
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Contact Derek Scott ☎ 01620 823137, (Saturday 1 – 4pm). Bridge Centre, Poldrate, Haddington, East Lothian, Scotland.
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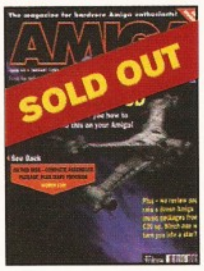
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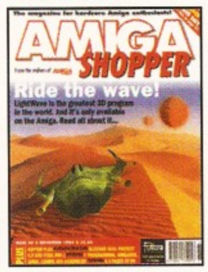
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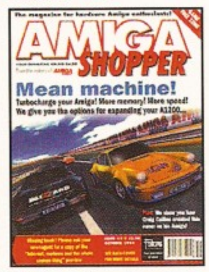
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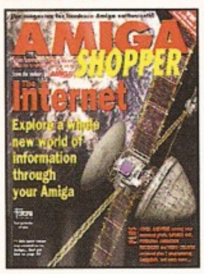
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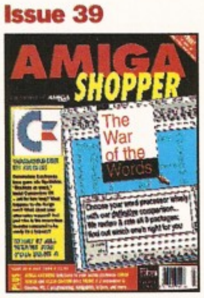
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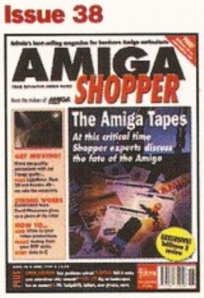
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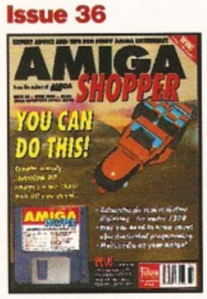
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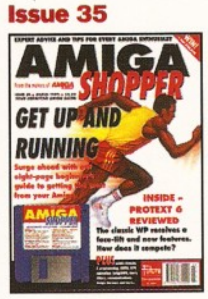
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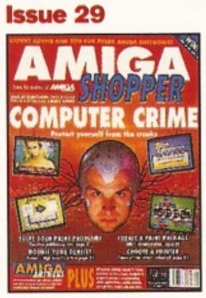
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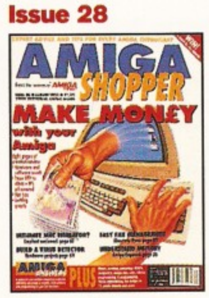
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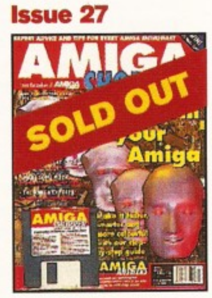
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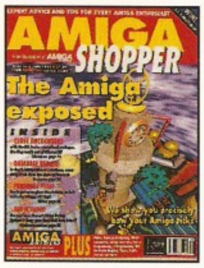
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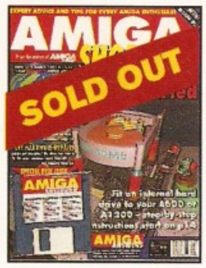
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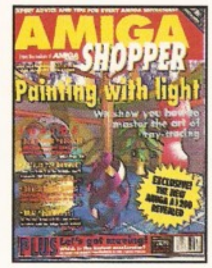
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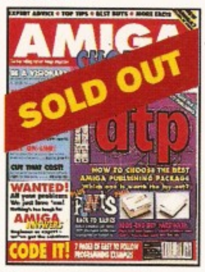
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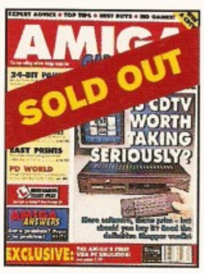
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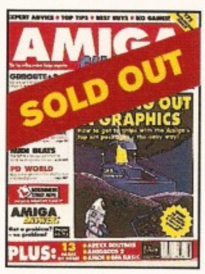
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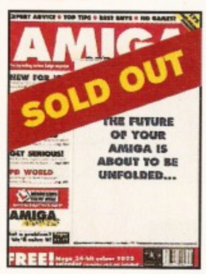
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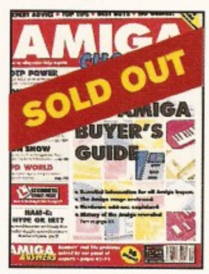
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Talking shop

A pretty varied bunch of letters this month, ranging from problems and suggestions, to congratulations for the revamped Amiga Shopper...

We've received sackloads of competition entries and Reader Surveys in the Amiga Shopper office, but there's a noticeable lack of Talking Shop letters. So come on you lot, let's have your views and ideas and, remember, you could win £25 if your contribution is chosen as the star letter of the month.

Satisfied customer

£25 Winner

I wonder if you were aware of the consequences that would arise following your decision to put a Datastore file on the Amiga Shopper 47 Coverdisk?

Fortunately, I was able to go to Canterbury and buy issue 68 of Amiga Format before it sold out and hence was able to use the demo of Datastore. Looking at the data in the Amiga Format files was interesting enough; I only opened it so as to compare it with Pen Pal. However, when I opened the A>S. files I was dumbstruck by the amount of information that the fields showed.

Fortunately, or perhaps unfortunately, for me I have scattered about every issue of Amiga Shopper from day one and now I have been forced, *forced* I say, to put them in order, so that I can find the articles in which I have become interested through having seen them in the database. This has meant that I have to spend even more time in the Computer Room (sorry, spare bedroom) to the chagrin of my wife and family to whom I have become a wraith that they see only if they look very hard for me.

I just *had* to write and comment about this absolutely brilliant Datastore file you made. Thanks very much!

T. H. Connell
Whitstable, Kent

And thank you for your kind words, T. H. Now you've won £25 for sending in the letter of the month, you can drag yourself away from the Computer Room and take your wife and children to the pictures!

Bits and pieces

Perhaps he was a little set in his ways, but it was a rather severe shake-up to oust poor old Baggers.

N Papadopoulos
Lokridos, Greece

We have no intention of ousting Mr Baguley – he will be appearing regularly in the magazine as a freelance writer. Check out his modem supertest on page 26.

My word, what a change! On first inspection, it seems a great improvement, with more in-depth articles, more news, more PD, a brilliant new layout and, of course, the new Coverdisks. Fantastic, but one problem is the hefty hike-up in the price. For a magazine that started out a few years ago at less than a pound, to now costing four times as much is quite a jump.

Ed Freeman
Rugby, Warwickshire

You've said it yourself, Ed. We've improved the paper quality, gone full colour, increased the number of pages in the magazine and added two Coverdisks. Add to that the fact that paper and printing prices have increased considerably over the years and the £3.95 price makes more sense.

A lot of cheek

It's about time we had a lass for an editor, but, let's face it, your magazine hardly had a superb content did it? Before you tear this paper into tiny bits muttering (or indeed shouting) 'cheeky bastard', read on a bit – this is a criticism of the constructive kind, in the form of suggestions.

You need to get the readers more involved in the magazine and I don't mean letters and Q&A (by the way, do you write them yourself and say they're from the readers, like dodgy mags found on the top shelves of grotty newsagents?). Your back page caption competition was a good step towards the sort of thing, but you could go further.

How about giving your readers the chance to design the front cover of your fine magazine, do an article on how your art editor (or whoever) does a typical front cover, i.e. specifications, deadlines allowed, how subject is chosen etc? This does have its drawbacks, because you will have to disclose what you will be looking at in two months time which is asking for competition.

What about an article written by a reader once a month, not unlike (how's that for a double negative) the columns by Jeff Walker and Tim Smith in your sister magazine, Amiga Format? In other words, just an extended letter on something to do with computers. Give a prize for the best, or just leave it open for a budding/want-to-be/has-been reporter.

Give us a few music mods on the Subscribers' disk to build up my collection of 124 mods. Also, whilst putting a mod file on the disk, could you put two particular fonts on there as well, the one which you use for the main test in the magazine (because it's easy to read) and the one which looks like hand writing on Next Month (page 122, issue 47)?

My final suggestion is, could you fix up an interview with the programmer/designer of Photogenics, because I believe he is only 17 (or so I read somewhere). If this is true, he is definitely going to be a major influence on the Amiga market for a long time.

Benjamin Nicholl
Stockton On Tees, Cleveland

Firstly, I am always happy to get suggestions from readers for features they would like to see in Amiga Shopper. We are also always looking at ways in which we can get the reader more involved with the magazine, which is partly why we ran a Reader Survey in the last issue.

We have a Photogenics tutorial starting this month on page 76. I have noted your suggestion for an interview with the creator and for the competition for readers to design the cover. I'm not sure how feasible that would be – our covers are normally connected with the main feature of the particular issue, but I will give the idea some thought.

We never make up the questions and answers in Amiga Answers ourselves – they are all genuine queries, supplied by our readers. We ask people to send in their questions every month (see page 71) and we always receive plenty of questions which are passed on to our panel of experts to answer.

I have passed your suggestion about including more music mods on our Subscriber's disk on to Graeme (who compiles it) and his exact words were: 'What a good idea' – so expect to see some appearing in the near future!

Disk blues

I am sorry to say that I've run into difficulties with my Amiga Shopper Subscribers' disk 47. I have tried AIBB6.5 and it works OK, but Filthy Lucre and Lottery Winner are both causing trouble.

Lottery Winner keeps putting up a Guru No 800000003, which says it is an address zero 'attempt to read or write a long word that is an uneven address'. I have copied the program again from the original disk in case it was a copying error, but the error remains.

Filthy Lucre keeps telling me it cannot find

Subjects of interest

What machine would you like 'Commodore' to produce next?

£25 Winner

Write in to Talking Shop and tell us what you want from a new Amiga.

And if you have any suggestions for features, or anything else that you would like to see in your favourite Amiga magazine, then write to us at Talking Shop.

The star letter of the month gets £25. Now wouldn't that come in handy?

Womble Font and it certainly doesn't appear to be on the disk. There was a note in the leaflet about the possibility of having to copy fonts and Libs to my own Fonts and Libs directories, but I can't find either of these directories on the disk – the only one is 'C'.

Hooray! Last month, I wrote to you asking you to put out an index on disk and, lo and behold, there it is. You had obviously been planning it long before I wrote. Will you publish updates, or must we get typing to keep it up-to-date?

I haven't sent the disk back to the copiers, because I thought it better to wait and see what you could tell me. I mean, if there are no Fonts or Libs on my disk, there are not likely to be any on the other disks, are there and everyone is in the same boat.

Hoping you can help.

W. B. Tarbuck
Davyhulme, Manchester

Sorry you're experiencing problems, W. B. Can you give us a little more information about the difficulties you're having with Lottery Winner – for example, which Amiga are you using, what version of Workbench are you running and how much memory do you have? We need all this information in order to work out exactly what your problem is.

Filthy Lucre. Er... We forgot to put the Womble Font on the disk. Ooops! It will appear on the May ShopperChoice disk.

Ch, ch, ch, changes...

I very much welcome the long overdue changes to Amiga Shopper. Issue 47 was the best issue that I have seen. The new layout is better and the Coverdisks are appreciated.

Jason Holborn's Public Domain review will be a very valuable reference and Dave Haynie's supertest of programming languages is the most comprehensive I have seen in an Amiga magazine and, as a result, I have finally made a choice of languages in which to start programming AMOS.

I would like to draw your readers' attention to a couple of matters concerning the Public Domain review. Show STD is a useful program, but Julian Wright's fine PD program Dialling Codes V1.5 is a Phone Day ready and I would suggest *that* as the best phone code program. Readers who order Fish Disk 721 *do* get a pleasant surprise, because included on that disk is V.1.62 of Chris Hames's DirWork which, like SID, is an excellent directory utility and preferred by some reviewers to SID.

Finally, I can strongly recommend Scion (the present version is 3.13) – it is easy to use and works beautifully.

A. G. Kelly
Yate, Avon

Another happy reader – your comments are appreciated A. G.!

A few suggestions...

After seeing the first issue of your new-style Amiga Shopper I have a few suggestions.

I am sure many people agree that the return of a regular AMOS tutorial would greatly improve the magazine. The previous series was to me very successful and certainly warrants a successor.

I also think that there should be a greater selection of software or hardware reviews. Maybe it was just this issue, but these certainly rank highly on my first-read list when I open the mag.

Lastly I would like to see more Comms features on subjects like Fidonet and local BBSs, as well as the mighty Internet. I know you do one-off features on these subjects, but a regular column on Fidonet and the Internet would be nice.

Colin Gray
Prestwick, Scotland

I would be interested to hear if any other readers want to see the return of an AMOS tutorial. Please write in to Talking Shop and let me know.

As to the software and hardware reviews, you will notice that, as well as a huge modem supertest (page 26), we have 10 pages devoted to reviews of new products this month and we intend to squeeze as many as we can into each issue from now on.

And if you turn to page 82, you will find that our regular Comms tutorial is all about the Fidonet – you must be psychic.

Price explosion!

I am a subscriber to Amiga Shopper and I have just received my renewal letter. This offered me a fantastic deal to renew my subscription – £47.40 for 18 issues. How much? I think you may have missed the point, like Cantona misses Man Utd. OK, it's a good deal with six free issues and Subscribers' disks, but I cannot

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Take a look at the back cover of this issue of Amiga Shopper, then at the picture printed below. Can you come up with a witty Amiga Shopper- (or, indeed, Amiga-) related caption to use on the back-cover of a future issue? If your wit surpasses the Amiga Shopper team's (though we doubt it, of course), then we'll send you a cheque for £25.

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Pic: Hulton Deutsch

The Beatles at the Palace, 1965.

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afford £50 in one go. The last thing I read before this letter came was that subscribers would not be charged any more for renewing. What happened?

I will renew if you can offer me 12 issues at the old price of £30, but can afford no more.

The new mag is much better looking though, but put decent PD on the Coverdisks.

Yours in debt.

Chris Firth
Cowes, Isle Of Wight

I'm glad you like the new look of the magazine. As to the subscription changes, the price has increased because of the two new Coverdisks. Over the next year we have some tremendous titles lined up to put on those disks and, remember, as a subscriber you get a special third disk too every month.

If you subscribe now, you will be getting 18 issues of Amiga Shopper for the price of 12 (see page 60 for details) – that's equal to £2.63 per issue – which, for a magazine with two Coverdisks is amazing value for money. As for paying for it all in one go... yes, I agree, it may be difficult for some people – that's why, from the May issue, we will be offering our readers a six month direct debit option.

Oh dear...

There are several contradictions within what is your main feature. In the main article, you say that the Z5 has five Zorro slots with the first mention, stating that they are for Zorro III cards, but in the two sub features 'The Mark Of Zorro and 'Ramiga Z5 vs A4000 vs A4000T' it states that the Z5 is equipped with four Zorro slots.

This leaves me totally confused, but *then* it would appear that Richard Baguley is too.

In paragraph 13 of the main feature, it states "...but only three of the 3 1/5 inch bays have holes at the front. The two bottom drive bays are behind the panel for the buttons and the clock display. This means that you could have a hard disk located in the bottom drive bay, with the floppy disk drive located in the one above..." But Richard, didn't you just say: 'The bottom two drive bays are behind the panel for the buttons and the clock display'?

Michael Cofferon
Swansea, West Glamorgan

You are right, Baggers got a little confused in his main feature last issue. The Z5 actually adds five Zorro II slots to your A1200. And, you're right again, he's not very good with numbers, is he? Next time, I'll tell him to take his shoes off too!

Missing details

First, I'd like to congratulate you on Shopper's new look. At last we have a professional-looking magazine for this underrated platform.

I am a newcomer to the Amiga from the Mac (which I still use). However, I cannot help but notice a number of details missing concerning the representation of a serious software section in this mag that I would like to be included:

1. There are no tutorials – or 'how to' – sections on imaging and processing software, such as Image FX2.0, AdPro, TV Paint and the brilliant Photogenics.

I am a devout reader of Amiga- and Mac-related journals. TV Paint is to me a top painting and processing package, yet I cannot get to witness this through any Amiga publication.

2. Because my main interest is DTP, I would like to see more on this subject. Yes I am an optimist, but that optimism is built on what I know this platform to be capable of.

I must also take this opportunity to chastise the majority of advertisers in Amiga journals for not mentioning multitasking and CrossDOS in their copy. We must assume that once in a while somebody out there will be picking up this mag, looking to purchase his/her first or second computer... like me.

Oh, can someone tell me where I can purchase CrossMAC (I hope it comes standard in system 4.0)? Once I am satisfied with the inclusions of the above, not only will I subscribe, I'll sell my Mac as well.

All in all, Amiga Shopper is a great mag with a capacity to become even greater. Thanks very much for your support.

Angelo Szymanek
West Hampstead, London

1. As I mentioned in an earlier answer, if you turn to page 76, you'll find the first of Graeme's six-part Photogenics tutorial and, on page 90, the PD section is devoted to graphics packages.

2. We intend to include more DTP features and tutorials in forthcoming issues of Amiga Shopper – at the moment we are planning a supertest on BubbleJet printers, for example – hopefully for the June issue of AS.

Your best bet is to check all the advertising pages in this issue for suppliers of CrossMAC. ■

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Tel: 01708 766066

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Tel: 01702 462426

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Tel: 0923 220558

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Tel: 0268 273273

Software Emporium
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Tel: 01603 633362

TORC Software
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Tel: 081 893 2100

Viking Computers
Ardney Rise, Catton Grove Rd, Norwich, NR3 3QH
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Tel: 0233 663996

F1 Return
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Tel: 0502 512416

SOUTHWEST

Softsell Mail Order
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Computer Plus
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4 Holland Walk, Barnstaple, Devon, EX31 1DW
Tel: 0271 78787

Computerbase
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Tel: 0752 668635

Exmouth Computers
7/9 Exeter Road, Exmouth, Devon, EX8 1PN
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Megabit Computers
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2a Blenheim Road, Minehead, Somerset, TA24 5PY
Tel: 0643 703883

Total Computing
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Ancics
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Tel: 0703 404773

Hytek Computer Retals Ltd
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Tel: 0633 868131

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Soft-ly
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Tel: 0234 218228

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Mr Softee
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Tel: 0204 31058

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Silvercourt Cent, Silver St, Stockton, Cleveland, TS18 1SX

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Software Superstores Ltd
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27/33 Paragon Street, Hull, Humberside, HU1 3NA
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203 Stanford St, Ashton-Under-Lyne, Lancs, OL6 7QB
Tel: 061 339 0326

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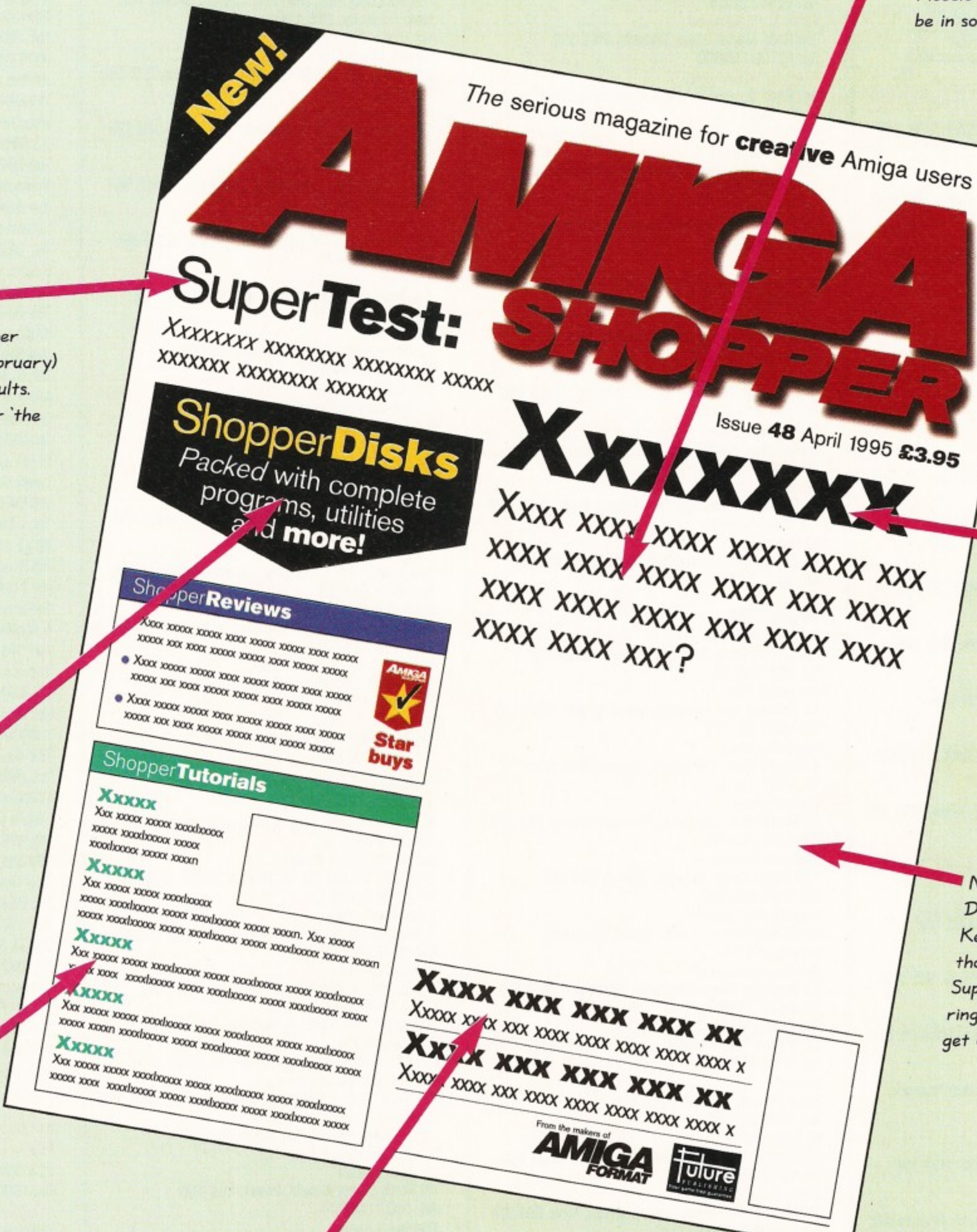
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Tel: 0569 764051

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20 Commerce Street, Blginm, Moray, IV30 1BS
Tel: 0343 552000

Holburn Software
111 Holburn Street,Aberdeen,AB1 6BQ
Tel: 0224 592515

Silica at Debenhams
5th Floor, 97 Argyle Street, Glasgow, Strathclyde, G2 8AR
Tel: 0141 241 0088

Next month



Anna
Shamms has sent another interview over from the States and Gary says his copy for the Piccolo SD64 graphics card will be in soon.

Sue
We need to get the Amiga Shopper reader awards from issue 46 (February) compiled so we can print the results. Arrange to collect the plaque for 'the Amiga Person of the Year'.

Sue
Remember to phone David Pleasance to arrange an interview so we can talk about the latest Commodore UK situation. (Hang on, didn't you say that last month? – Reader)

Graeme
We need to make sure that Tim from Total Guitar has the Boom Box Coverdisk and manual so he can get on with the disk instructions.

Nick
Don't forget that John Kennedy is sending us all those CD-ROMs for the Supertest and you need to ring your photographer and get a shoot arranged a.s.a.p.

Sue
Toby's new DICE tutorial starts this month and you need to ask him for the Assembler stuff too. And remind Graeme to start his second Photogenics tutorial.

Graeme
Make sure that all those readers' questions get sent out to the experts for Amiga Answers and I've asked Jason to write the Public Domain feature on business packages.

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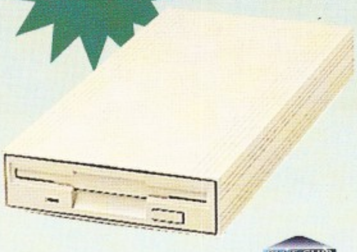


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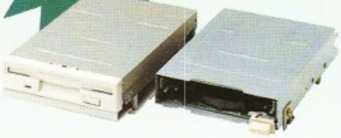
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